SCD-C333ES

SERVICE MANUAL

Ver. 1.1 2005.06

US Model
Canadian Model

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM59-DVBU5
Optical Pick-up Type	KHM-230AAA/J1NP

SPECIFICATIONS

When a super audio CD is played

Playing frequency range	2 Hz to 100 kHz
Frequency response	2 Hz to 50 kHz (–3 dB)
Dynamic range	103 dB or more
Total harmonic distortion rate	0.0015 % or less
Wow and flutter	Value of measurable limit (±0.001 % W. PEAK) or less

When a CD is played

Frequency response	2 Hz to 20 kHz
Dynamic range	99 dB or more
Total harmonic distortion rate	0.002 % or less
Wow and flutter	Value of measurable limit (±0.001 % W. PEAK) or less

Output connector

	Jack type	Output level	Load impedance
ANALOG OUT	Phono jacks	2 Vrms (at 50 kilohms)	Over 10 kilohms
DIGITAL (CD) OUT OPTICAL*	Square optical output connector	–18 dBm	(Light emitting wave length: 660 nm)
DIGITAL (CD) OUT COAXIAL*	Coaxial output connector	0.5 Vp-p	75 ohms
PHONES	Stereo phone jack	10 mW	32 ohms

*Output only the audio signals of the CD

General

Laser radiant power:	5.47 uW at 650 nm

*These output is the value measured at a distance of about 200mm from the objective lens surface on the optical pick-up.

Power requirements	120 V AC, 60 Hz
Power consumption	28 W
Dimensions (w/h/d)	430 × 138 × 409 mm (17 × 5 1/2 × 16 1/8 in.) incl. projecting parts
Mass (approx.)	10.5 kg (23 lbs 3 oz.)

Supplied accessories

- Audio connecting cord (phono jack × 2 ←→ phono jack × 2) (1)
- Remote commander (remote) RM-SC300 (1)
- R06 (size-AA) batteries (2)

Design and specifications are subject to change without notice.

SUPER AUDIO CD PLAYER

9-929-551-12
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Audio Group
Published by Sony Engineering Corporation

SONY®

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SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth Ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

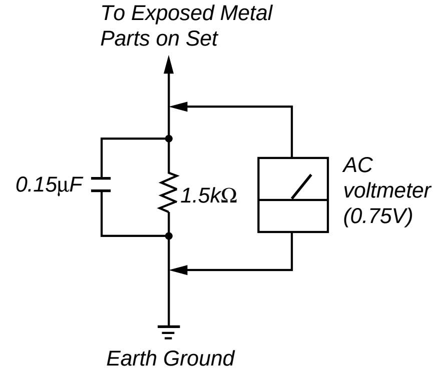


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT
À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
SERVICING NOTES (1)

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.
The emission check enables continuous checking of the S curve.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in “CD section adjustment” and check that the S curve waveform is output three times.

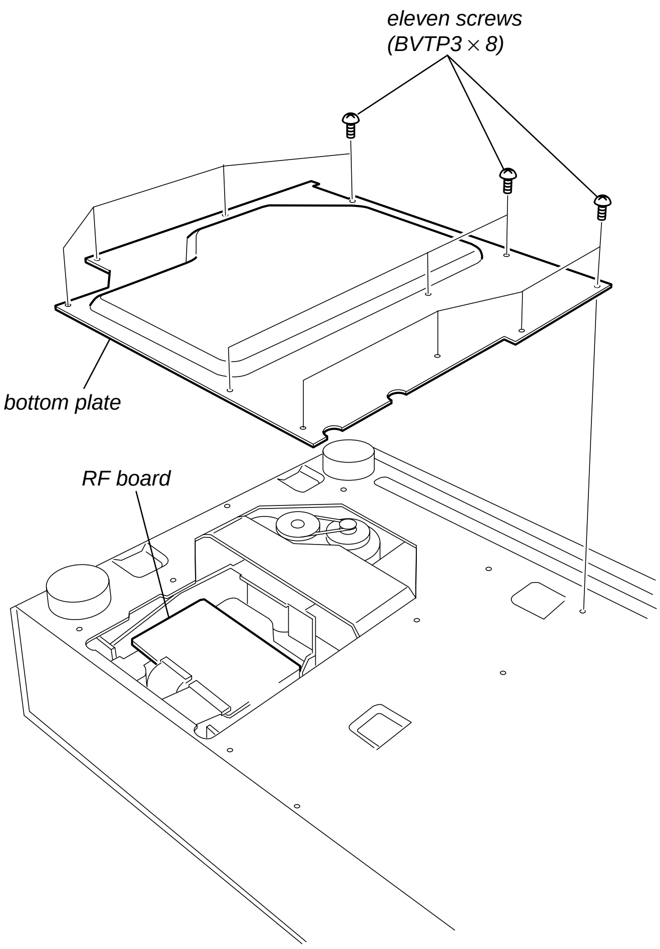
Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

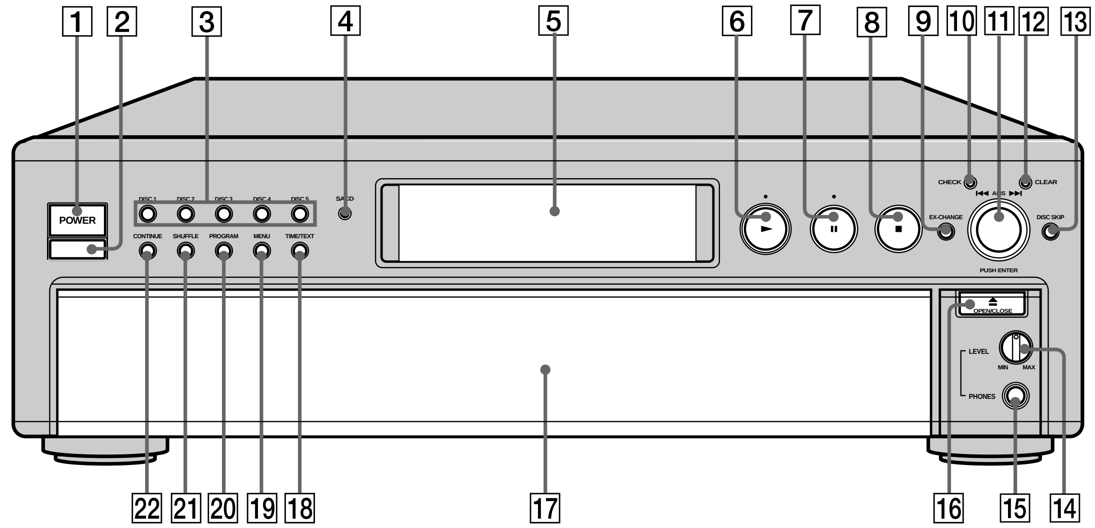
When the bottom plate is removed, the RF board can be checked.



SECTION 2
GENERAL

This section is extracted from instruction manual.

Front Panel Parts Descriptions


1
2
3
4
5
6
7
8
9
10
11
12
13
POWER
DISC 1
DISC 2
DISC 3
DISC 4
DISC 5
SACD
CONTINUE
SHUFFLE
PROGRAM
MENU
TIME/TEXT
CHECK
CLEAR
AMS
EX-CHANGE
DISC SKIP
PUSH ENTER
OPEN/CLOSE
LEVEL
MIN
MAX
PHONES
22
21
20
19
18
17
16
15
14

1 POWER switch (11)
Press to turn on / off the player.

2 Remote sensor R (4)

3 DISC 1–5 button (12)
Press to select the disc.

4 SACD/CD button (with an LED) (10)
Each time you press the button while the Hybrid disc (page 11) is loaded, the layer changes between an HD layer (the LED turns on) and CD layer (the LED turns off).

5 Display window (13)
Shows various information.

6 ► button (12)
Press to start play.

► indicator
Lights up during playback.

7 ❚❚ button (12)
Press to pause play.

❚❚ indicator
Lights up during pause.

8 ■ button (12)
Press to stop play.

9 EX-CHANGE button (15)
Press to replace discs while playing a disc.

10 CHECK button (19)
Press to check the programmed order.

11 |◁◁AMS▷▷| dial (AMS: Automatic Music Sensor) (12)
When you turn the |◁◁AMS▷▷| dial counterclockwise by one click, you go back to the preceding track; when you turn the |◁◁AMS▷▷| dial clockwise by one click, you go to the succeeding track.

12 CLEAR button (20)
Press to delete a programmed track number.

13 DISC SKIP button (11)
Press to select the disc.

14 PHONE LEVEL control
Adjust the headphones volume.

15 PHONES jack
Connect the headphones.

16 ⏏ OPEN/CLOSE button (11)
Press to open / close the disc tray.

17 Disc tray (11)
Press ⏏ OPEN / CLOSE to open / close the disc tray.

18 TIME/TEXT button (13)
Each time you press the button, the playing time of the track, the total remaining time on the disc, or TEXT information appears in the display.

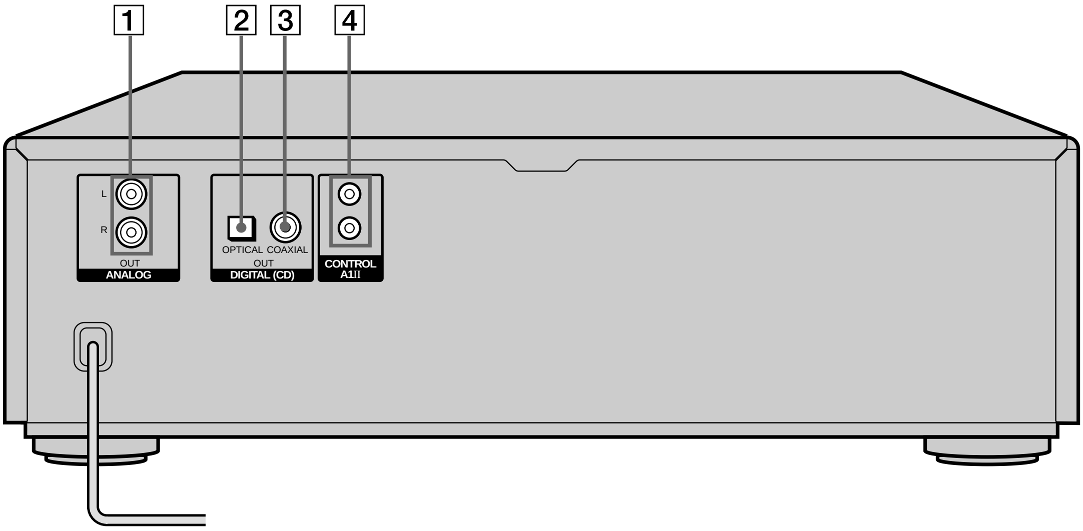
19 MENU button (5)
Press to enter the menu.

20 PROGRAM button (19)
Press to select Program Play.

21 SHUFFLE button (18)
Press to select Shuffle Play.

20 CONTINUE button (12)
Press to resume normal play from Shuffle Play or Program Play.

Rear Panel Parts Descriptions


1
2
3
4
L
R
OUT
ANALOG
OPTICAL
COAXIAL
OUT
DIGITAL (CD)
CONTROL
A1Ⅱ

1 **ANALOG OUT jacks (5)**
Connect to an audio component using the audio connecting cord.

2 **DIGITAL (CD) OUT OPTICAL connector (5)**
Connect to an audio component using an optical digital cable.

3 **DIGITAL (CD) OUT COAXIAL connector (5)**
Connect to an audio component using the coaxial digital cable.

4 **CONTROL A1 Ⅱ jack (5)**
Connect to the Sony audio component using the monaural (2P) mini-plug cord.

Note
Only the audio signals of the CD can be output from the DIGITAL (CD) OUT connectors shown in 2 and 3. Those of the Super Audio CD cannot be output through DIGITAL (CD) OUT.

Remote Parts Descriptions

1 **CONTINUE button (12)**
Press to resume normal play from Shuffle Play or Program Play.

SHUFFLE button (18)
Press to select Shuffle Play.

PROGRAM button (19)
Press to select Program Play.

2 **DIGITAL FILTER button (20)**
Press to select the digital filter type when a CD is played.

3 **DISC/CAPS button (15, 23)**
Press to select the disc.
Press to select the capital letter.

4 **Number buttons (15)**
Press to enter the track numbers.

5 **>10 button (16)**
Press to locate a track numbered over 10.

6 **REPEAT button (17)**
Press repeatedly to play all tracks or only one track on the disc.

7 **NAME INPUT button (23)**
Press to enter the name input mode.

8 **▷ button (12)**
Press to start play.

❚❚ button (12)
Press to pause play.

■ button (12)
Press to stop play.

9 **AMS ⏮/⏭ (AMS: Automatic Music Sensor) buttons (16)**
Press to locate a specific track.

10 **◀◀/▶▶ buttons (16)**
Press to locate a portion you want to play within a track.

11 **DISC SKIP +/– buttons (11)**
Press to select the disc.

12 **CD1/2 (COMMAND MODE) switch (5)**
Select the command mode.

13 **DISPLAY MODE button (13)**
Press to turn off the information.

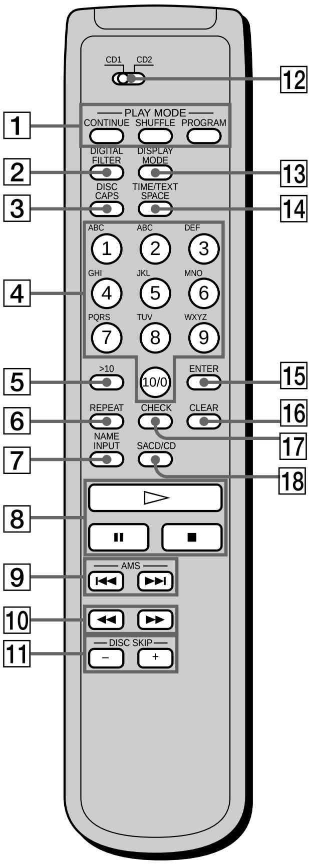
14 **TIME/TEXT/SPACE button (13, 23)**
Each time you press the button, the playing time of the track, the total remaining time on the disc, or TEXT information appears in the display.
Press to insert a space.

15 **ENTER button (23)**
Press to decide the selection.

16 **CLEAR button (19)**
Press to delete a programmed track number.

17 **CHECK button (19)**
Press to check the programmed order.

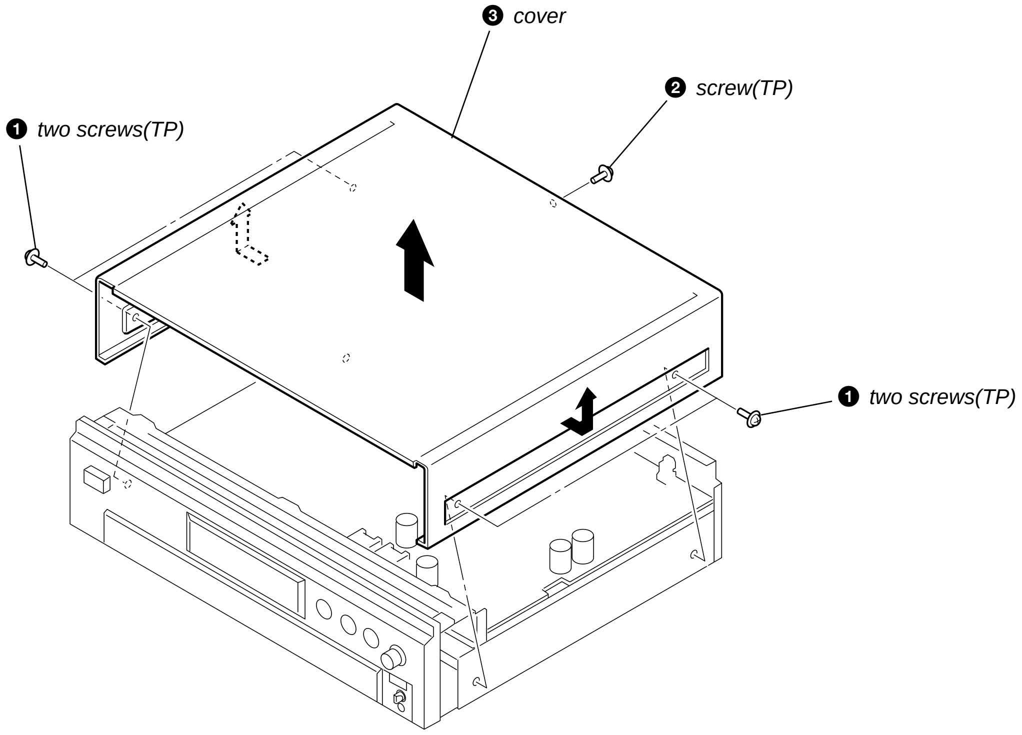
18 **SACD/CD button (10)**
Each time you press the button while the Hybrid disc (page 11) is loaded, the layer changes between an HD layer (the SACD / CD LED turns on) and CD layer (the SACD / CD LED turns off).


CD1
CD2
12
PLAY MODE
CONTINUE
SHUFFLE
PROGRAM
1
DIGITAL FILTER
DISPLAY MODE
2
13
DISC CAPS
TIME/TEXT SPACE
3
14
ABC
ABC
DEF
GHI
JKL
MNO
PQRS
TUV
WXYZ
1
2
3
4
5
6
7
8
9
4
>10
10/0
ENTER
5
15
REPEAT
CHECK
CLEAR
6
16
17
NAME INPUT
SACD/CD
7
18
8
AMS
9
10
DISC SKIP
–
+
11

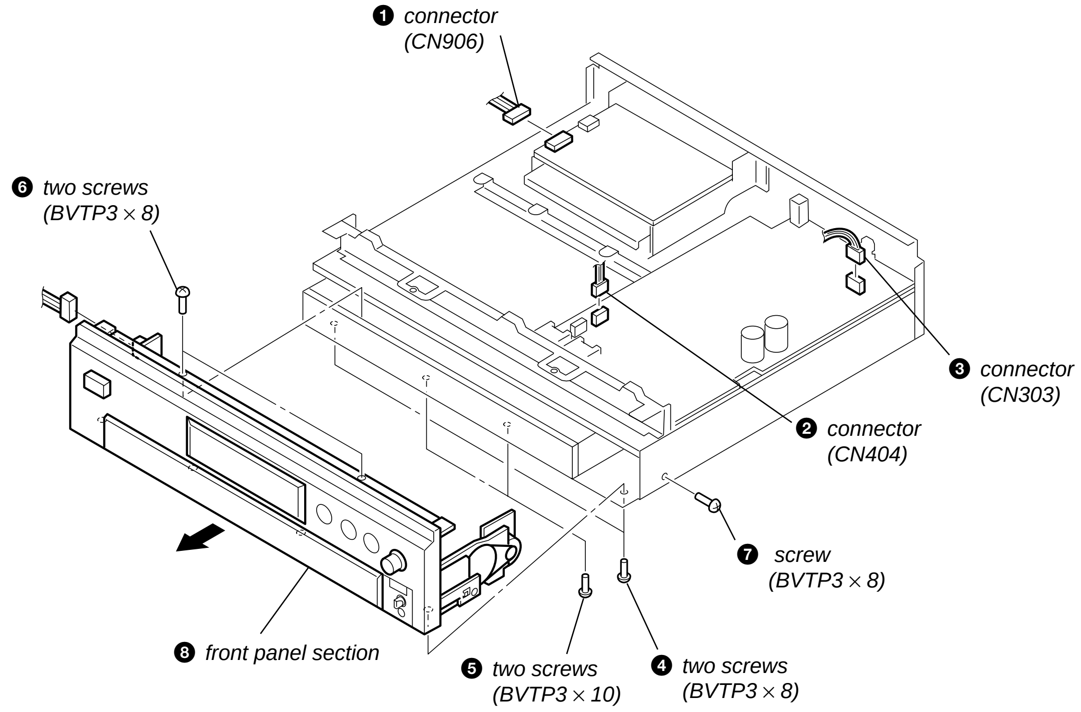
SECTION 3
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

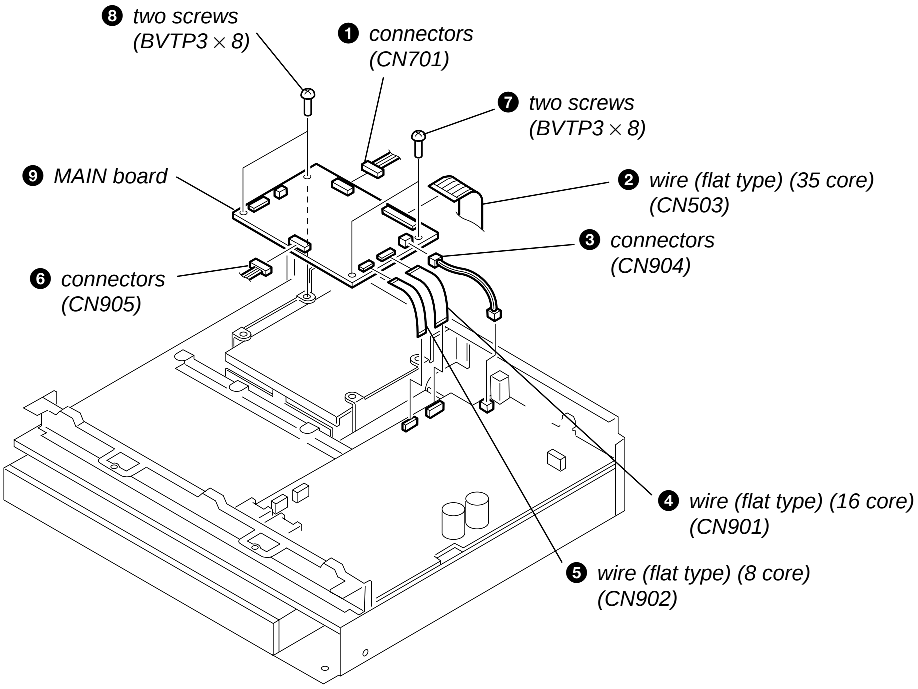
3-1. COVER


❸ cover
❷ screw(TP)
❶ two screws(TP)
❶ two screws(TP)

3-2. FRONT PANEL SECTION

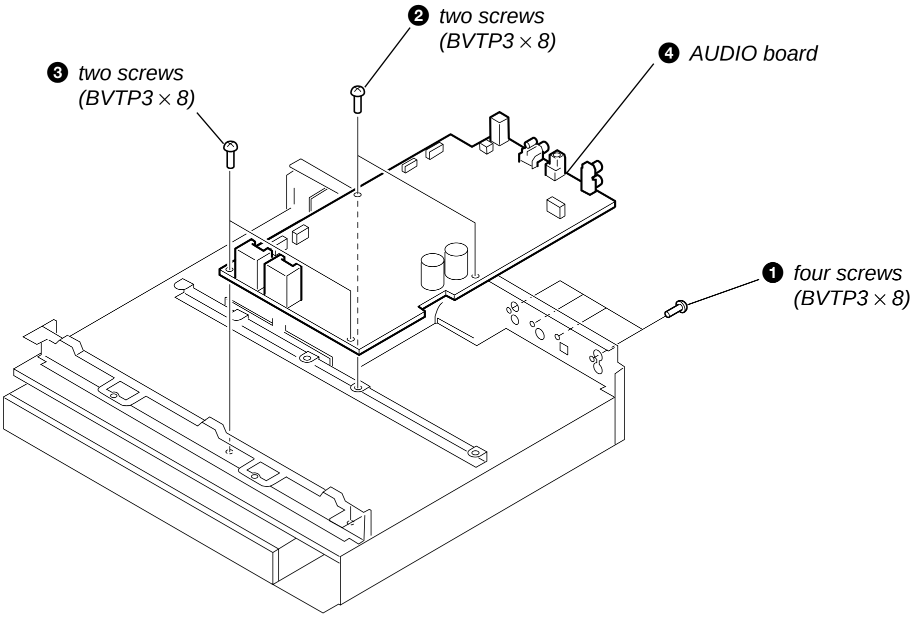

❶ connector (CN906)
❻ two screws (BVTP3 × 8)
❸ connector (CN303)
❷ connector (CN404)
❼ screw (BVTP3 × 8)
❽ front panel section
❺ two screws (BVTP3 × 10)
❹ two screws (BVTP3 × 8)

3-3. MAIN BOARD



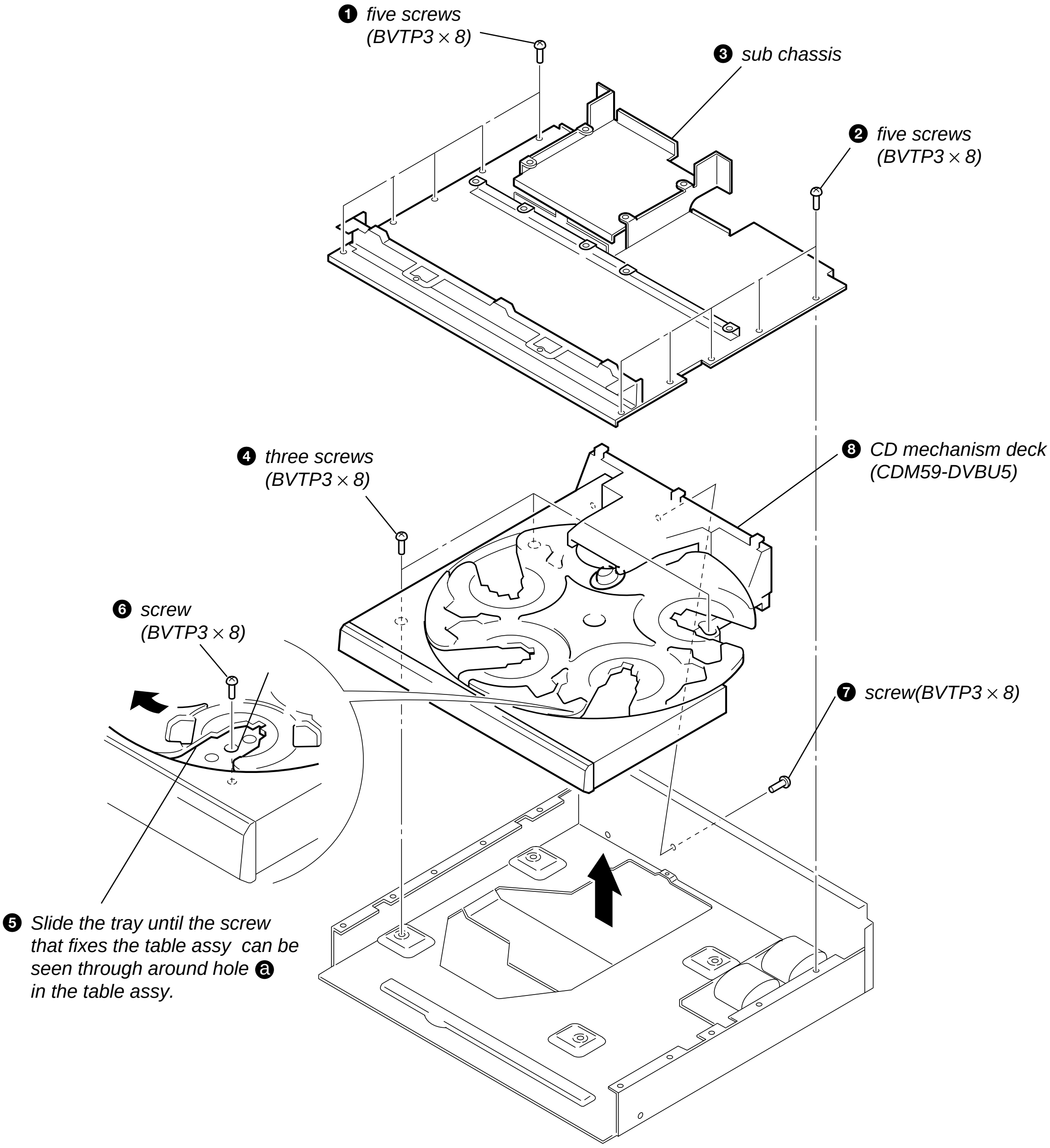
❽ two screws (BVTP3 × 8)
❶ connectors (CN701)
❼ two screws (BVTP3 × 8)
❾ MAIN board
❷ wire (flat type) (35 core) (CN503)
❸ connectors (CN904)
❻ connectors (CN905)
❹ wire (flat type) (16 core) (CN901)
❺ wire (flat type) (8 core) (CN902)

3-4. AUDIO BOARD



❷ two screws (BVTP3 × 8)
❹ AUDIO board
❸ two screws (BVTP3 × 8)
❶ four screws (BVTP3 × 8)

3-5. CD MECHANISM DECK (CDM59-DVBU5)



❶ five screws (BVTP3 × 8)

❷ five screws (BVTP3 × 8)

❸ sub chassis

❹ three screws (BVTP3 × 8)

❺ Slide the tray until the screw that fixes the table assy can be seen through around hole ⓐ in the table assy.

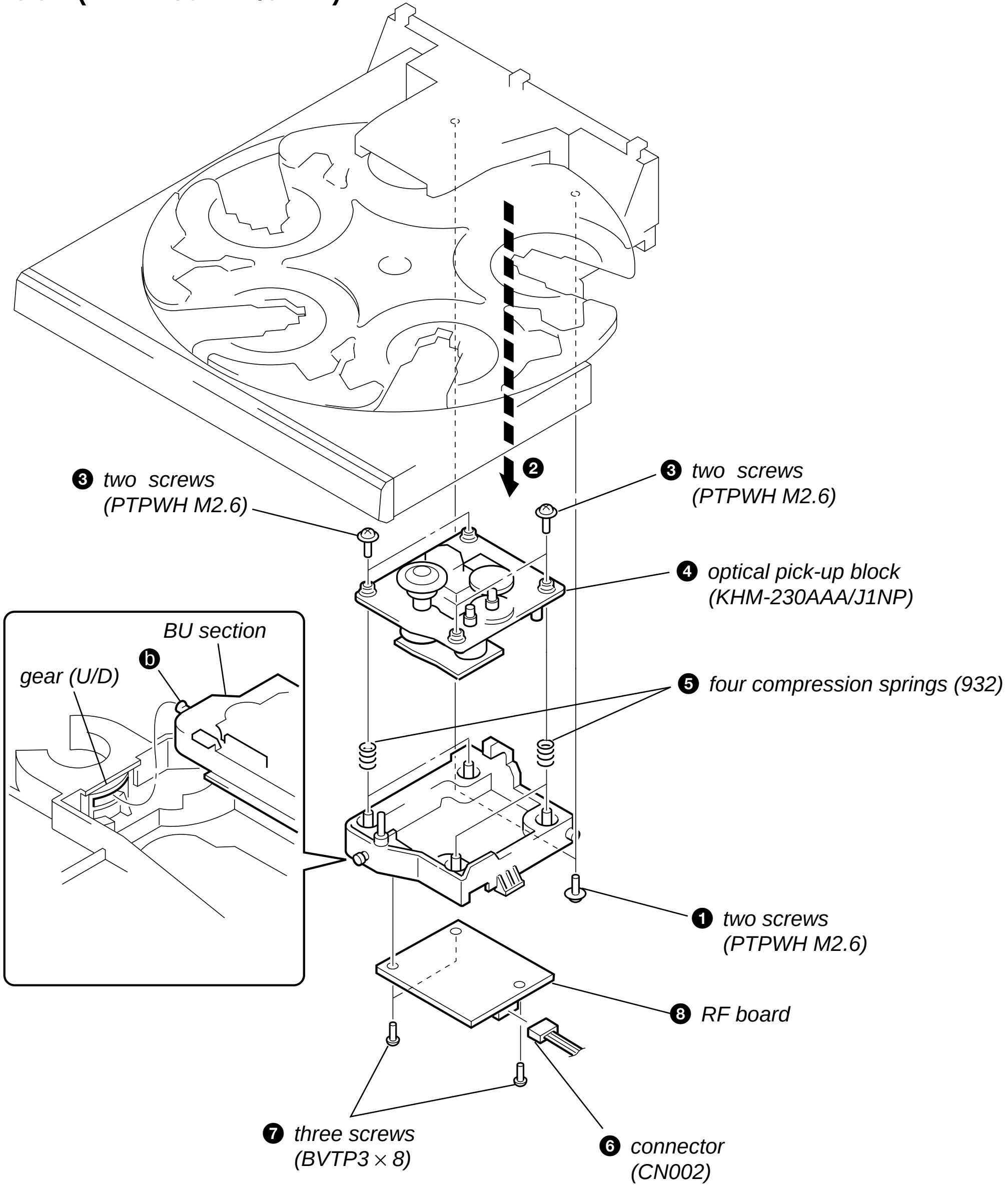
❻ screw (BVTP3 × 8)

❼ screw(BVTP3 × 8)

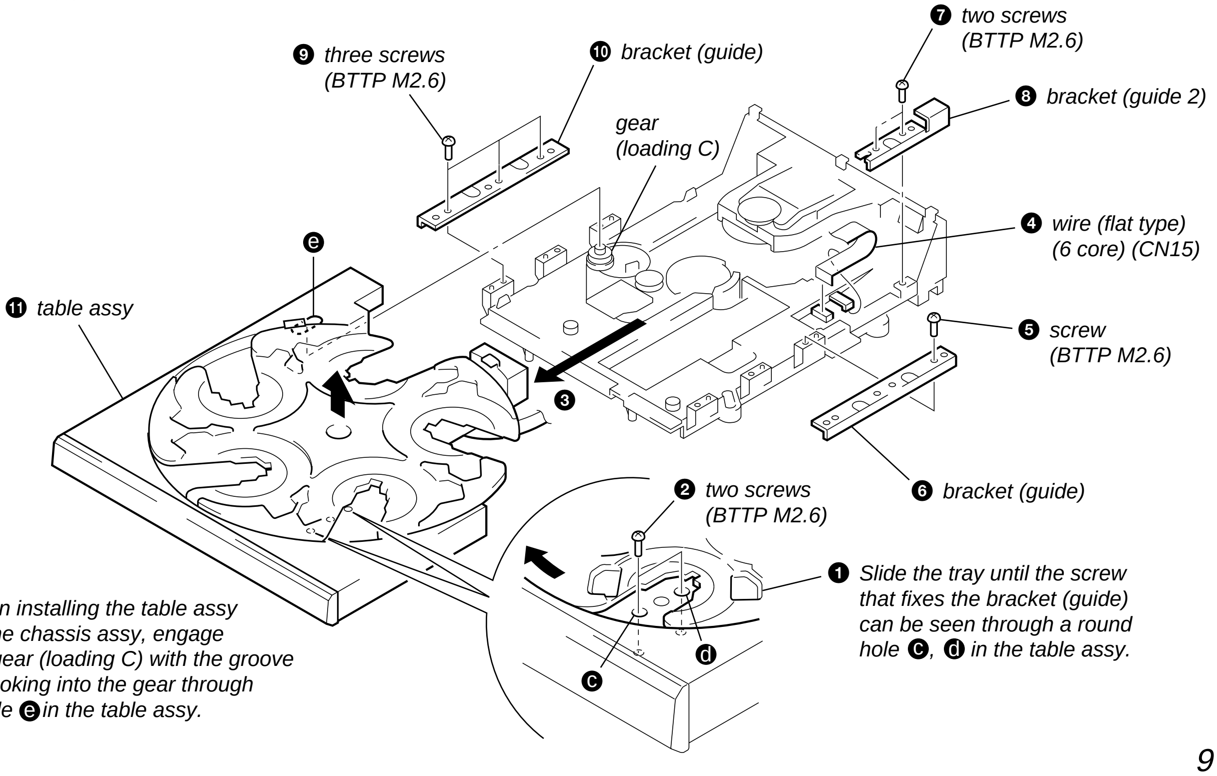
❽ CD mechanism deck (CDM59-DVBU5)

3-6. OPTICAL PICK-UP BLOCK (KHM-230AAA/J1NP)

Note: When installing the BU on the chassis, set the lever (lifter) in free position, the gear (U/D) in UP position, and insert the shaft ⓑ into the groove of gear (U/D).


❷
❸ two screws (PTPWH M2.6)
❸ two screws (PTPWH M2.6)
❹ optical pick-up block (KHM-230AAA/J1NP)
BU section
gear (U/D)
ⓑ
❺ four compression springs (932)
❶ two screws (PTPWH M2.6)
❽ RF board
❼ three screws (BVTP3 × 8)
❻ connector (CN002)

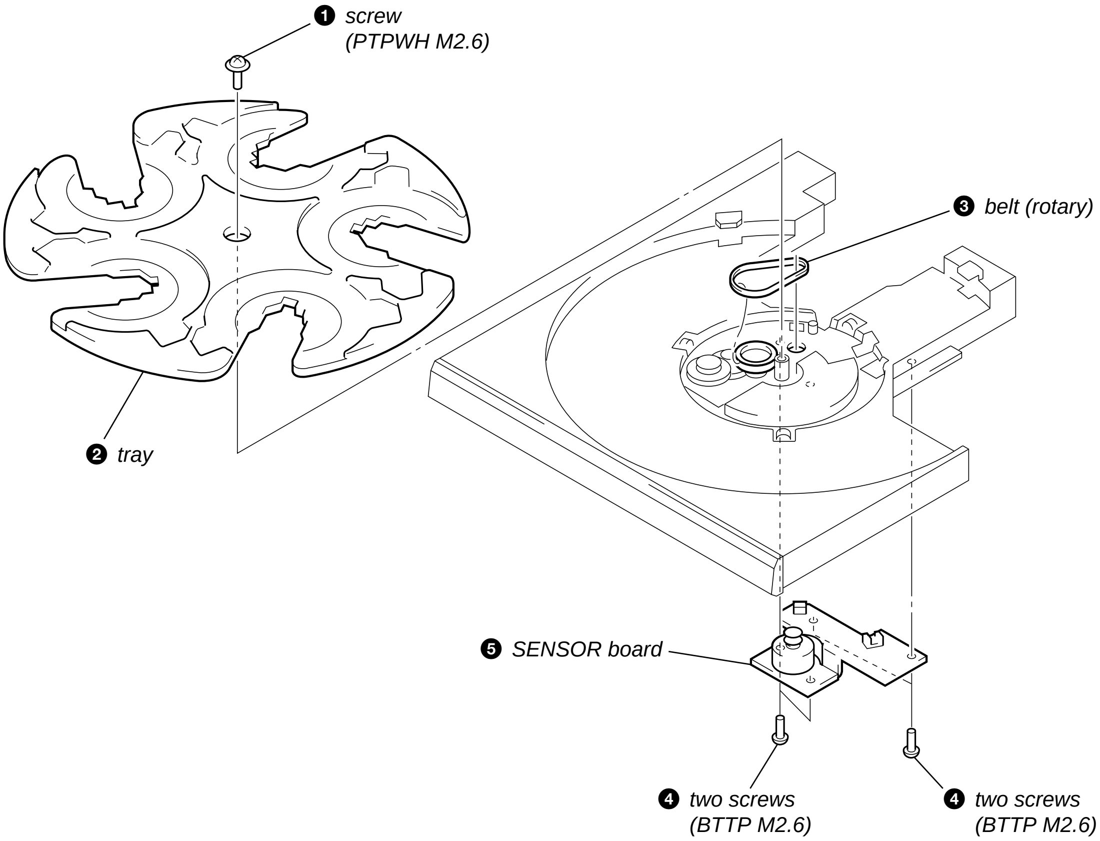
3-7. TABLE ASSY


❼ two screws (BTTP M2.6)
❾ three screws (BTTP M2.6)
❿ bracket (guide)
❽ bracket (guide 2)
gear (loading C)
ⓔ
❹ wire (flat type) (6 core) (CN15)
⓫ table assy
❺ screw (BTTP M2.6)
❸
❷ two screws (BTTP M2.6)
❻ bracket (guide)
ⓒ
ⓓ

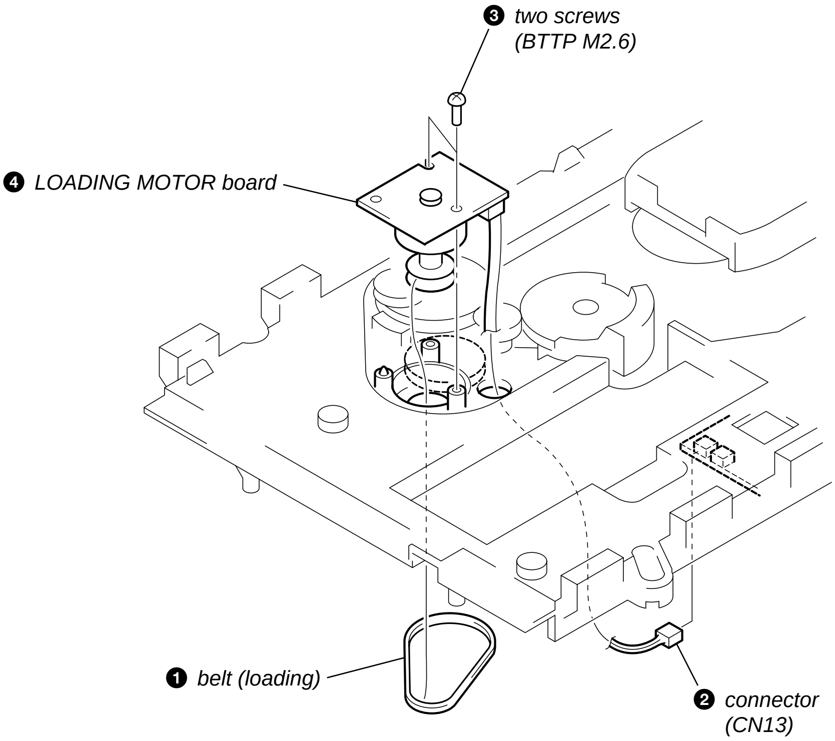
❶ Slide the tray until the screw that fixes the bracket (guide) can be seen through a round hole ⓒ, ⓓ in the table assy.

Note: When installing the table assy on the chassis assy, engage the gear (loading C) with the groove by looking into the gear through a hole ⓔ in the table assy.

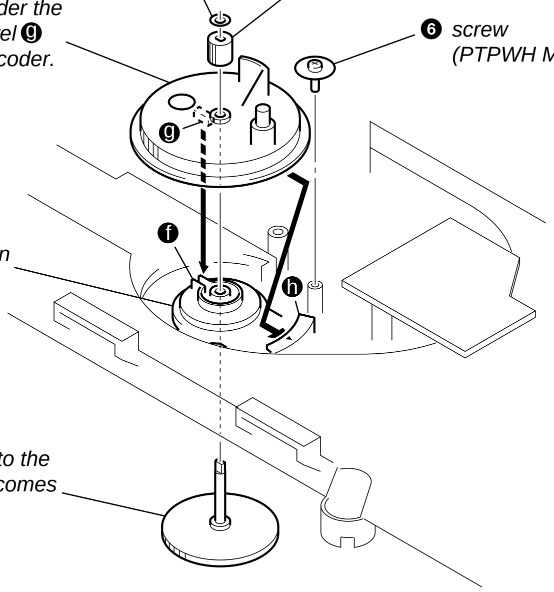
3-8. TRAY, SENSOR BOARD


❶ screw
(PTPWH M2.6)
❸ belt (rotary)
❷ tray
❺ SENSOR board
❹ two screws
(BTTP M2.6)
❹ two screws
(BTTP M2.6)

3-9. LOADING MOTOR BOARD


❸ two screws
(BTTP M2.6)
❹ LOADING MOTOR board
❶ belt (loading)
❷ connector
(CN13)

3-10. ADJUSTING PHASE OF SWING GEAR AND GEAR (U/D)



❶ *Insert the shaft gear up to the position where its shaft comes out by 5 mm.*

❷ *Install the rotary encoder so that its groove ⓕ comes to the position shown in the figure.*

❸ *Let the swing gear through under the chassis ⓗ and engage its dowel ⓖ with the groove ⓕ of rotary encoder.*

❹ *Push fully the shaft of shaft gear and align the hole shape of gear (loading B).*

❺ *stopper washer (FR)*

❻ *screw*
(PTPWH M2.6)

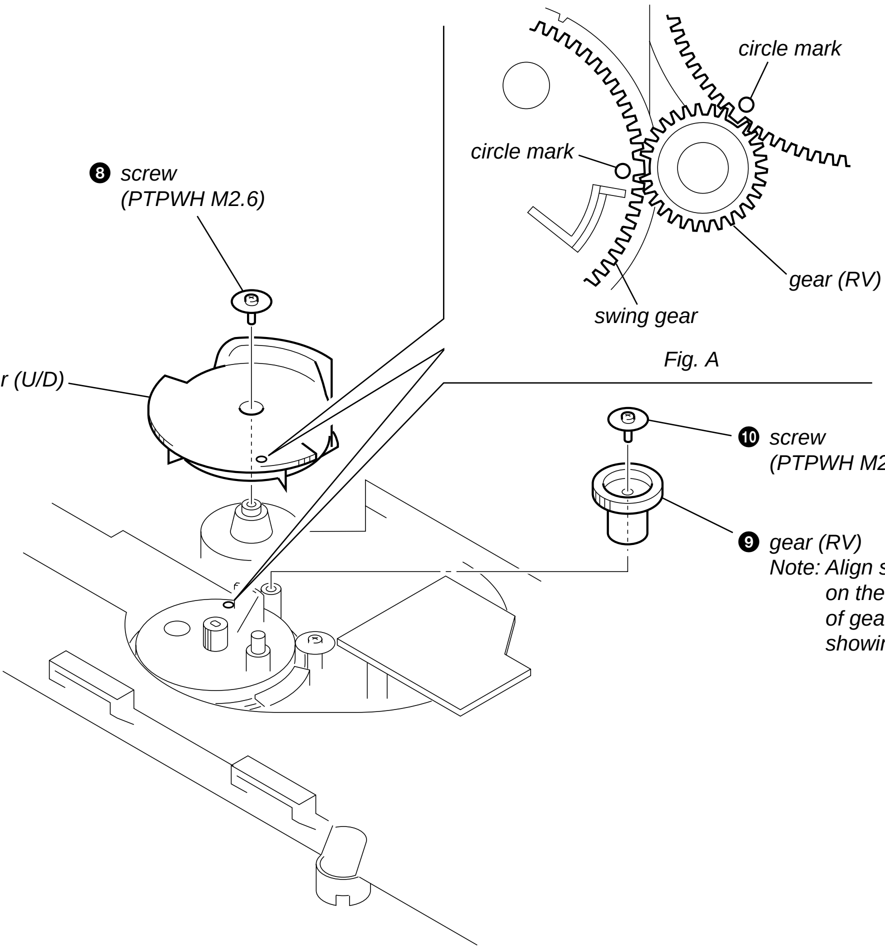


Fig. A

❼ *gear (U/D)*

❽ *screw*
(PTPWH M2.6)

❾ *gear (RV)*
Note: Align swing gear, a circle mark on the gear (U/D), and the teeth of gear (RV) to the position showing in the Fig. A.

❿ *screw*
(PTPWH M2.6)

SECTION 4
DIAGRAMS

NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

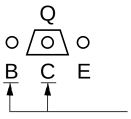
Note on Printed Wiring Board:

- o—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ▒ : Pattern from the side which enables seeing.

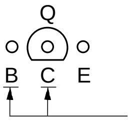
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (A Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (B Side)	Parts on the parts face side seen from the parts face are indicated.

- Indication of transistor



These are omitted.



These are omitted.

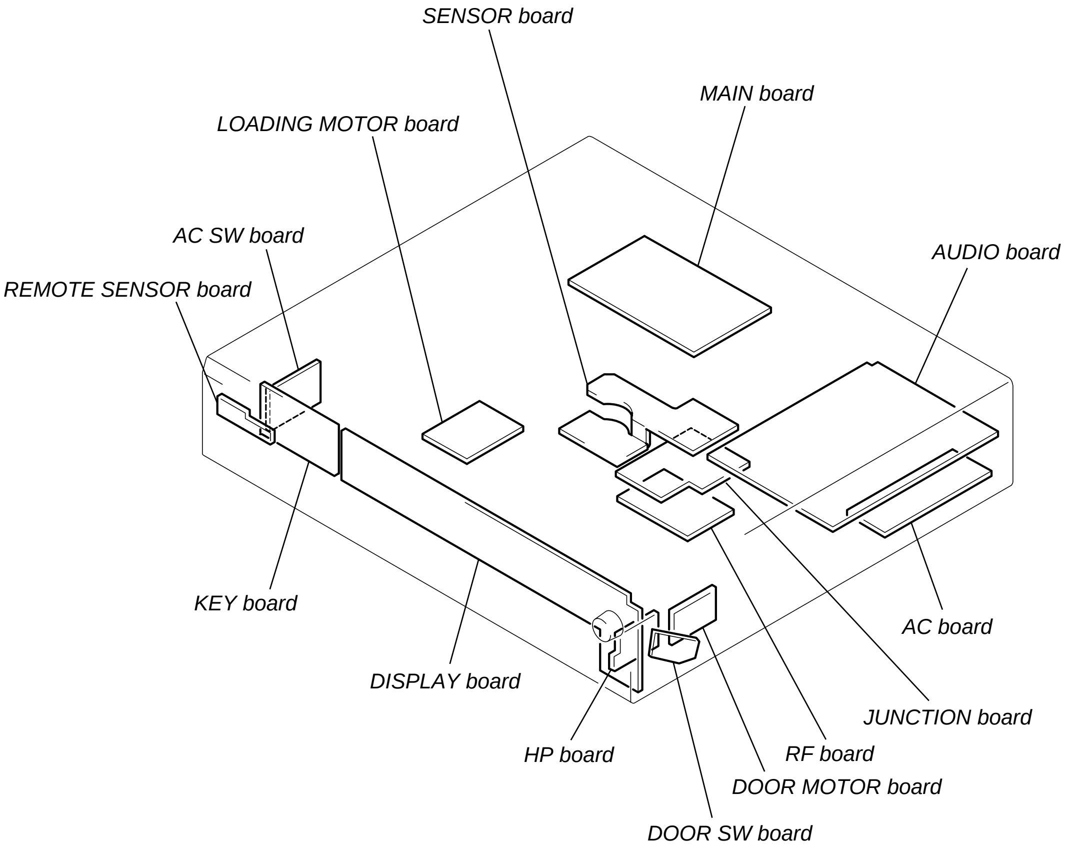
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$ W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- —ww•— : fusible resistor.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

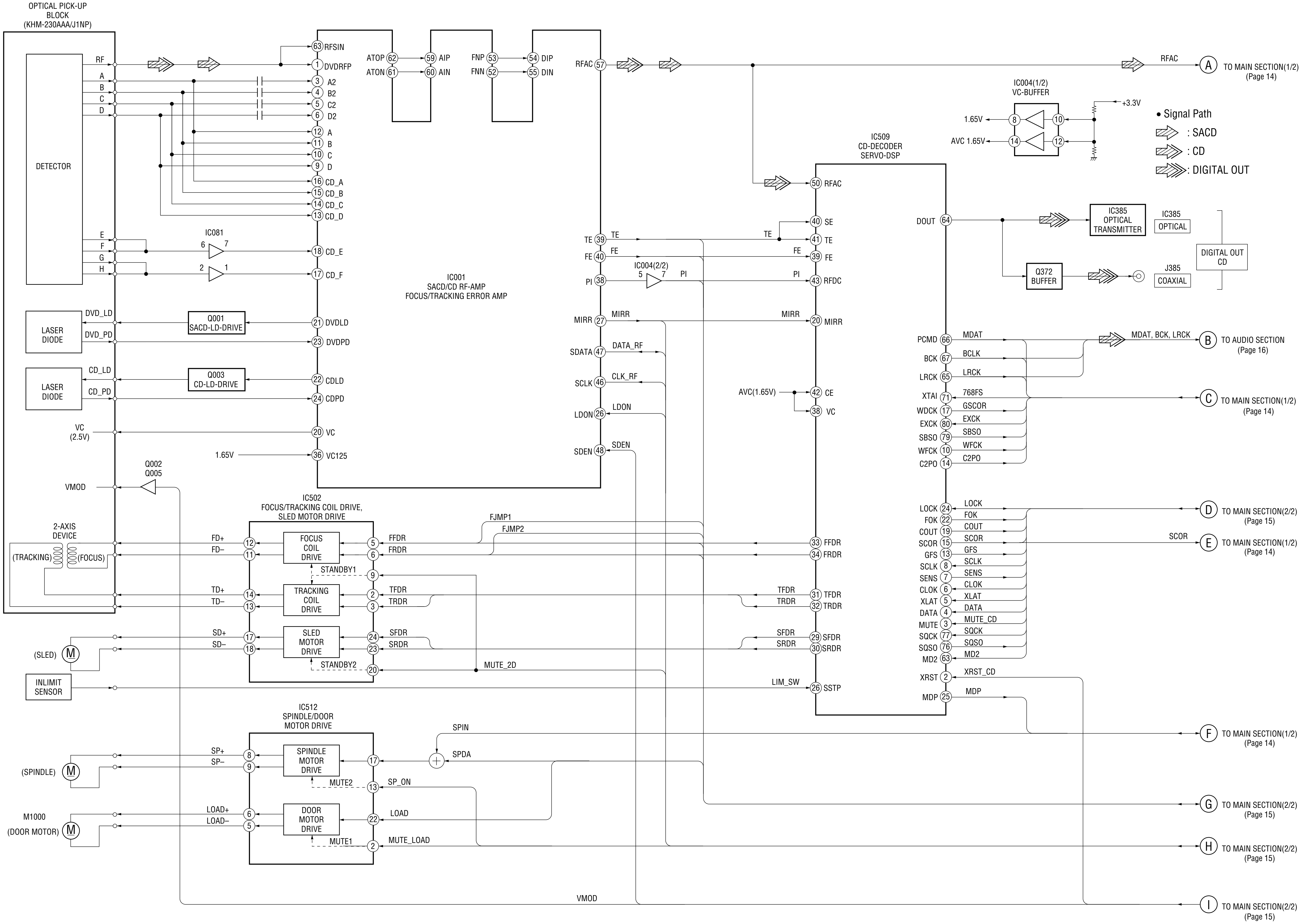
- **B＋** : B+ Line.
- **B－** : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : SACD
  ⇨⇨ : CD
  ⇨⇨⇨ : DIGITAL OUT

- **Circuit Boards Location**

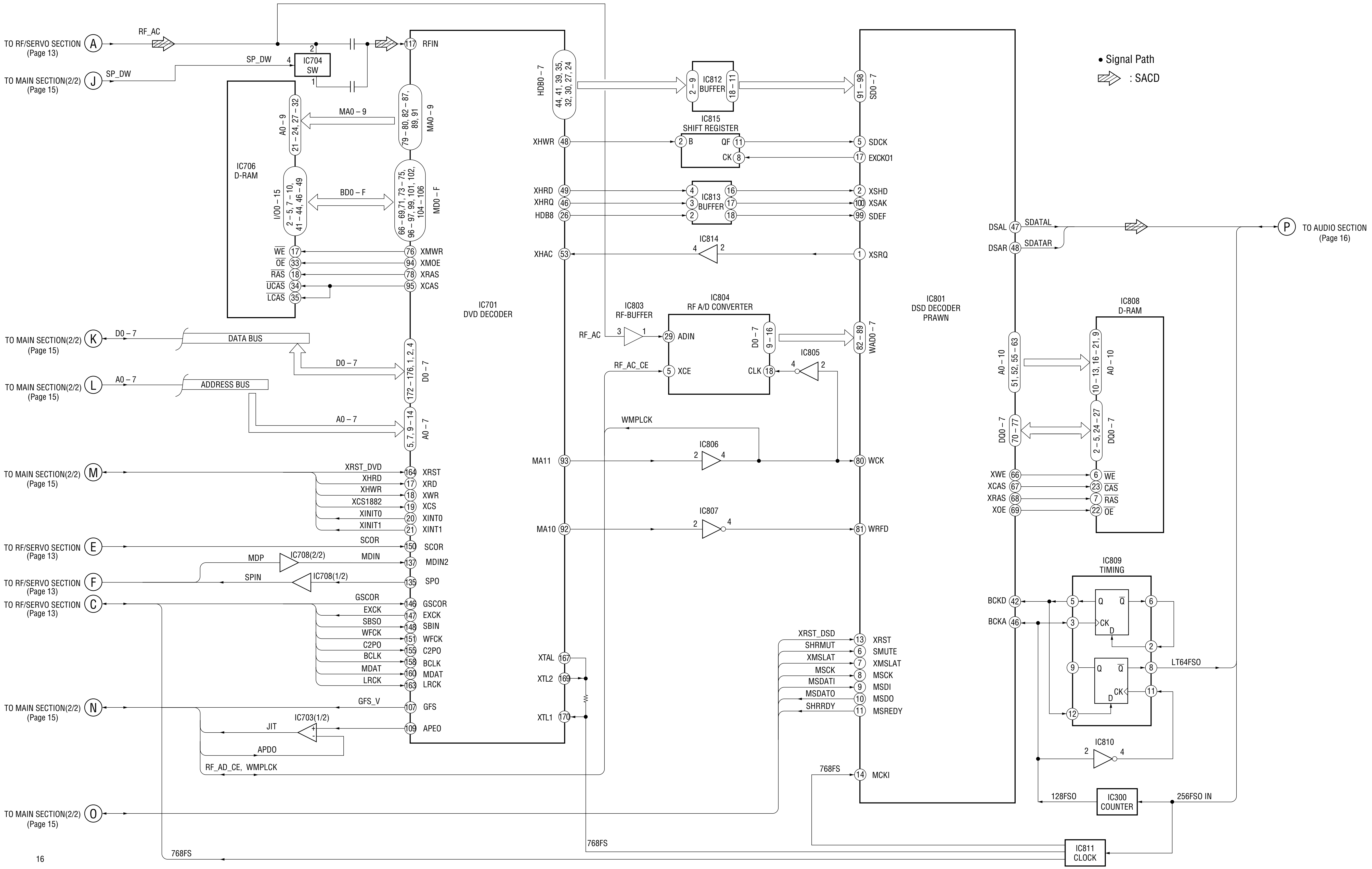


SENSOR board
MAIN board
LOADING MOTOR board
AC SW board
AUDIO board
REMOTE SENSOR board
KEY board
AC board
DISPLAY board
JUNCTION board
HP board
RF board
DOOR MOTOR board
DOOR SW board

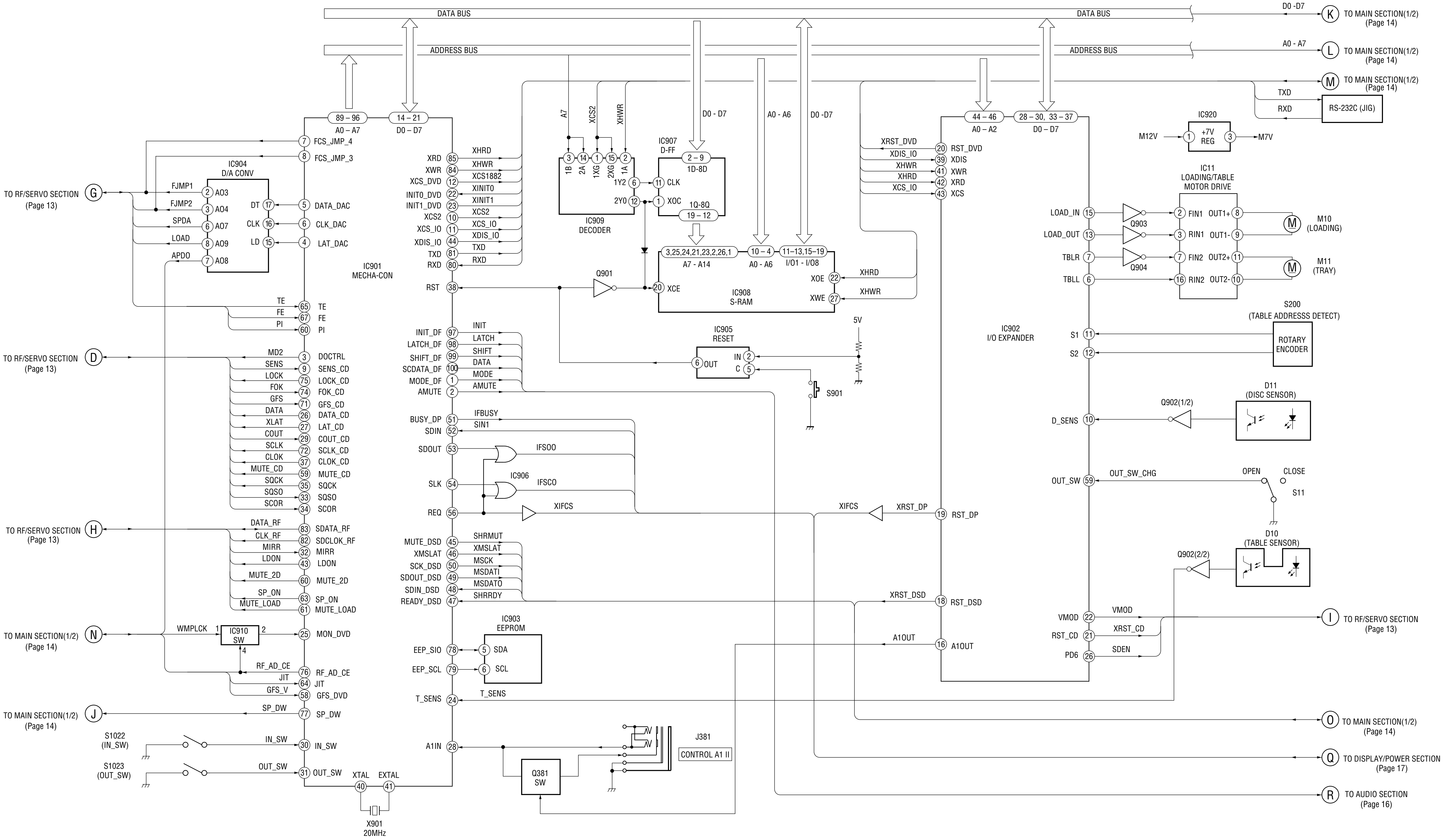
4-1. BLOCK DIAGRAMS
RF SECTION


OPTICAL PICK-UP BLOCK (KHM-230AAA/J1NP)
DETECTOR
RF
A
B
C
D
E
F
G
H
IC081
LASER DIODE
DVD_LD
DVD_PD
Q001 SACD-LD-DRIVE
LASER DIODE
CD_LD
CD_PD
Q003 CD-LD-DRIVE
VC (2.5V)
1.65V
VMOD
Q002 Q005
2-AXIS DEVICE
(TRACKING)
(FOCUS)
IC001 SACD/CD RF-AMP FOCUS/TRACKING ERROR AMP
63 RFSIN
1 DVDRFP
3 A2
4 B2
5 C2
6 D2
12 A
11 B
10 C
9 D
16 CD_A
15 CD_B
14 CD_C
13 CD_D
18 CD_E
17 CD_F
21 DVDLD
23 DVDPD
22 CDLD
24 CDPD
20 VC
36 VC125
ATOP 62
ATON 61
59 AIP
60 AIN
FNP 53
FNN 52
54 DIP
55 DIN
RFAC 57
TE 39
FE 40
PI 38
MIRR 27
SDATA 47
SCLK 46
LDON 26
SDEN 48
IC004(2/2)
TE
FE
PI
MIRR
DATA_RF
CLK_RF
LDON
SDEN
IC509 CD-DECODER SERVO-DSP
50 RFAC
40 SE
41 TE
39 FE
43 RFDC
20 MIRR
42 CE
38 VC
AVC(1.65V)
33 FFDR
34 FRDR
31 TFDR
32 TRDR
29 SFDR
30 SRDR
26 SSTP
LIM_SW
DOUT 64
PCMD 66
BCK 67
LRCK 65
XTAI 71
WDCK 17
EXCK 80
SBSO 79
WFCK 10
C2PO 14
LOCK 24
FOK 22
COUT 19
SCOR 15
GFS 13
SCLK 8
SENS 7
CLOK 6
XLAT 5
DATA 4
MUTE 3
SQCK 77
SQSO 76
MD2 63
XRST 2
MDP 25
MDAT
BCLK
LRCK
768FS
GSCOR
EXCK
SBSO
WFCK
C2PO
LOCK
FOK
COUT
SCOR
GFS
SCLK
SENS
CLOK
XLAT
DATA
MUTE_CD
SQCK
SQSO
MD2
XRST_CD
MDP
IC004(1/2) VC-BUFFER
1.65V
AVC 1.65V
+3.3V
• Signal Path
: SACD
: CD
: DIGITAL OUT
IC385 OPTICAL TRANSMITTER
IC385 OPTICAL
Q372 BUFFER
J385 COAXIAL
DIGITAL OUT CD
RFAC
A TO MAIN SECTION(1/2) (Page 14)
MDAT, BCK, LRCK
B TO AUDIO SECTION (Page 16)
C TO MAIN SECTION(1/2) (Page 14)
D TO MAIN SECTION(2/2) (Page 15)
SCOR
E TO MAIN SECTION(1/2) (Page 14)
F TO MAIN SECTION(1/2) (Page 14)
G TO MAIN SECTION(2/2) (Page 15)
H TO MAIN SECTION(2/2) (Page 15)
I TO MAIN SECTION(2/2) (Page 15)
IC502 FOCUS/TRACKING COIL DRIVE, SLED MOTOR DRIVE
FOCUS COIL DRIVE
TRACKING COIL DRIVE
SLED MOTOR DRIVE
FD+
FD–
TD+
TD–
SD+
SD–
FFDR
FRDR
FJMP1
FJMP2
STANDBY1
TFDR
TRDR
SFDR
SRDR
STANDBY2
MUTE_2D
(SLED)
INLIMIT SENSOR
IC512 SPINDLE/DOOR MOTOR DRIVE
SPINDLE MOTOR DRIVE
DOOR MOTOR DRIVE
SP+
SP–
LOAD+
LOAD–
MUTE2
MUTE1
SPIN
SPDA
SP_ON
LOAD
MUTE_LOAD
(SPINDLE)
M1000
(DOOR MOTOR)
VMOD

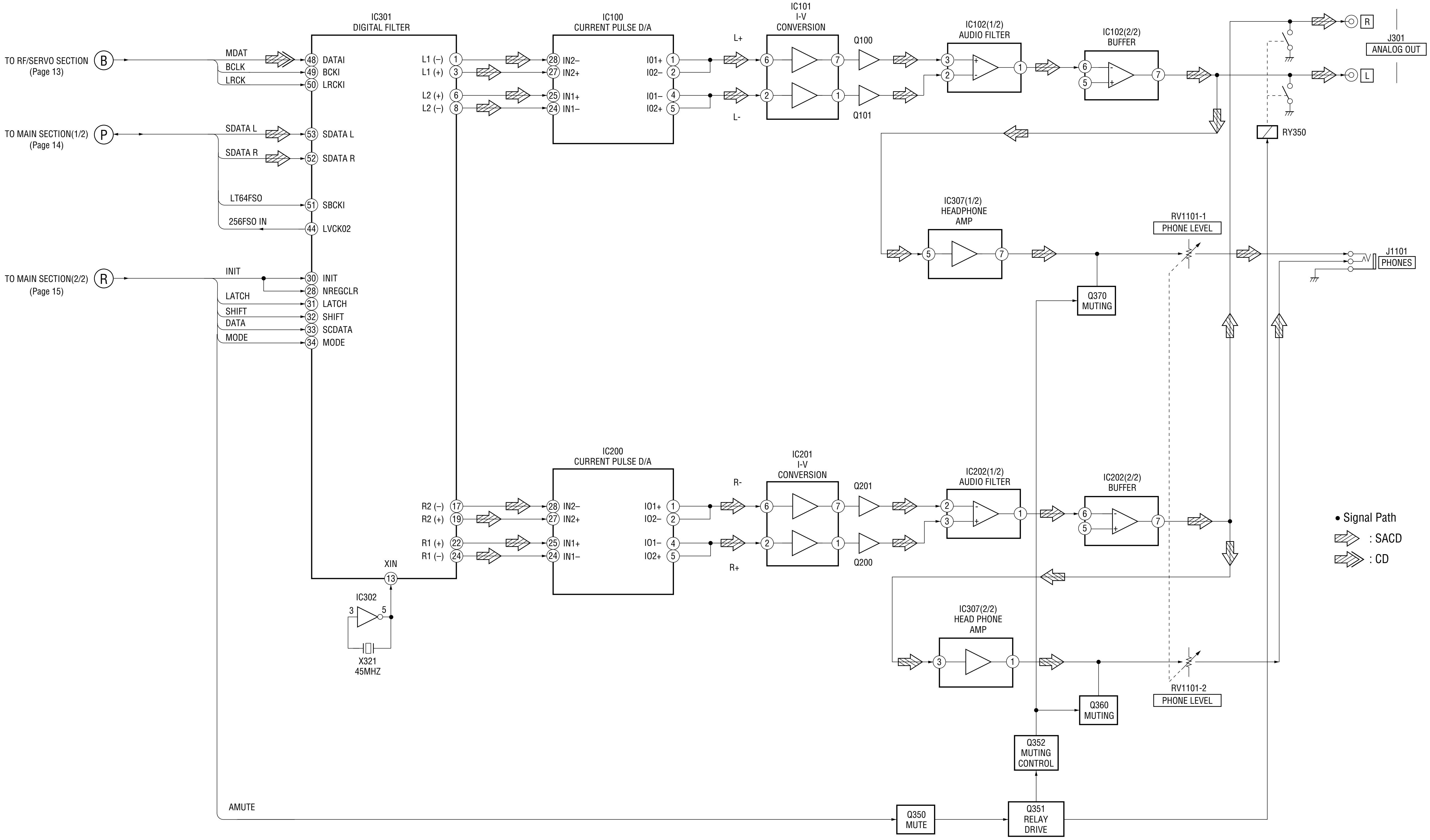
MAIN SECTION-1


• Signal Path
: SACD
TO RF/SERVO SECTION (Page 13) A
RF_AC
TO MAIN SECTION(2/2) (Page 15) J
SP_DW
IC704 SW
IC706 D-RAM
A0 – 9
21 – 24, 27 – 32
MA0 – 9
79 – 80, 82 – 87, 89, 91
I/O0 – 15
2 – 5, 7 – 10, 41 – 44, 46 – 49
BD0 – F
66 – 69, 71, 73 – 75, 96 – 97, 99, 101, 102, 104 – 106
MD0 – F
WE 17 – 76 XMWR
OE 33 – 94 XMOE
RAS 18 – 78 XRAS
UCAS 34 – 95 XCAS
LCAS 35
IC701 DVD DECODER
RFIN 117
HDB0 – 7
44, 41, 39, 35, 32, 30, 27, 24
XHWR 48
XHRD 49
XHRQ 46
HDB8 26
XHAC 53
TO MAIN SECTION(2/2) (Page 15) K
D0 – 7
DATA BUS
TO MAIN SECTION(2/2) (Page 15) L
A0 – 7
ADDRESS BUS
172 – 176, 1, 2, 4
5, 7, 9 – 14
TO MAIN SECTION(2/2) (Page 15) M
XRST_DVD 164 XRST
XHRD 17 XRD
XHWR 18 XWR
XCS1882 19 XCS
XINT0 20 XINT0
XINT1 21 XINT1
TO RF/SERVO SECTION (Page 13) E
SCOR 150 SCOR
MDP IC708(2/2) MDIN 137 MDIN2
TO RF/SERVO SECTION (Page 13) F
SPIN IC708(1/2) 135 SPO
TO RF/SERVO SECTION (Page 13) C
GSCOR 146 GSCOR
EXCK 147 EXCK
SBSO 148 SBIN
WFCK 151 WFCK
C2PO 155 C2PO
BCLK 158 BCLK
MDAT 160 MDAT
LRCK 163 LRCK
TO MAIN SECTION(2/2) (Page 15) N
GFS_V 107 GFS
JIT IC703(1/2) 109 APEO
APDO
RF_AD_CE, WMPLCK
XTAL 167
XTL2 169
XTL1 170
MA11 93
MA10 92
TO MAIN SECTION(2/2) (Page 15) O
16
768FS
IC812 BUFFER 2 – 9 18 – 11
IC815 SHIFT REGISTER B QF CK
IC813 BUFFER
IC814
IC803 RF-BUFFER
RF_AC
IC804 RF A/D CONVERTER
29 ADIN
5 XCE
RF_AC_CE
D0 – 7 9 – 16
CLK 18
IC805
WMPLCK
IC806
IC807
IC801 DSD DECODER PRAWN
91 – 98 SD0 – 7
5 SDCK
17 EXCKO1
2 XSHD
100 XSAK
99 SDEF
1 XSRQ
82 – 89 WAD0 – 7
80 WCK
81 WRFD
XRST_DSD 13 XRST
SHRMUT 6 SMUTE
XMSLAT 7 XMSLAT
MSCK 8 MSCK
MSDATI 9 MSDI
MSDATO 10 MSDO
SHRRDY 11 MSREDY
768FS 14 MCKI
DSAL 47 SDATAL
DSAR 48 SDATAR
TO AUDIO SECTION (Page 16) P
A0 – 10 51, 52, 55 – 63
DQ0 – 7 70 – 77
XWE 66
XCAS 67
XRAS 68
XOE 69
IC808 D-RAM
10 – 13, 16 – 21, 9 A0 – 10
2 – 5, 24 – 27 DQ0 – 7
6 WE
23 CAS
7 RAS
22 OE
IC809 TIMING
BCKD 42
BCKA 46
Q Q CK D
LT64FSO
IC810
128FSO
IC300 COUNTER
256FSO IN
IC811 CLOCK

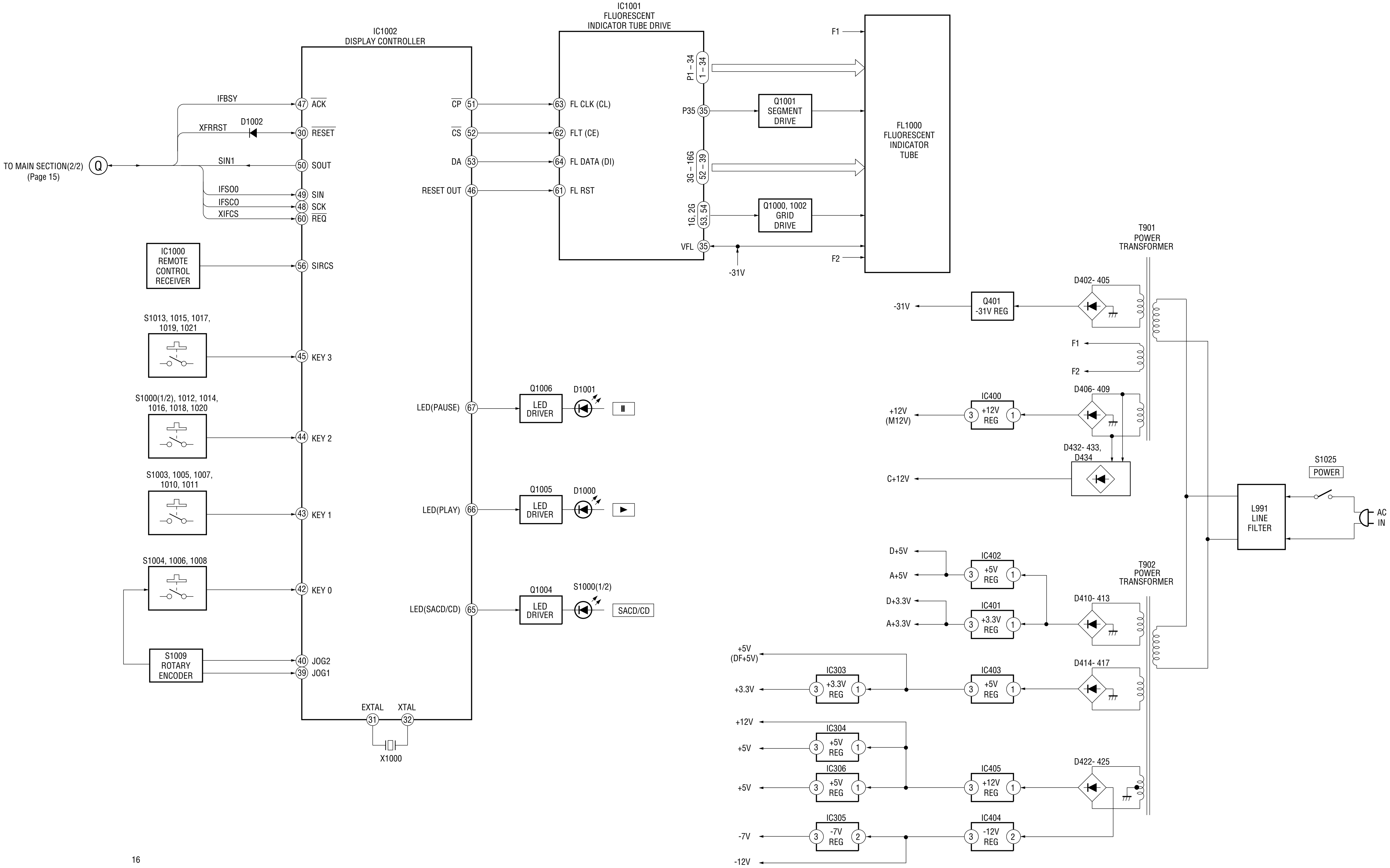
MAIN SECTION-2


DATA BUS
ADDRESS BUS
D0 -D7
A0 - A7
TO MAIN SECTION(1/2)
(Page 14)
TXD
RXD
RS-232C (JIG)
IC920
+7V
REG
M12V
M7V
89 – 96
A0 – A7
14 – 21
D0 – D7
FCS_JMP_4
FCS_JMP_3
IC904
D/A CONV
TO RF/SERVO SECTION
(Page 13)
FJMP1
FJMP2
SPDA
LOAD
APDO
A03
A04
A07
A09
A08
DT
CLK
LD
DATA_DAC
CLK_DAC
LAT_DAC
IC901
MECHA-CON
XRD
XWR
XCS_DVD
INIT0_DVD
INIT1_DVD
XCS2
XCS_IO
XDIS_IO
TXD
RXD
RST
XHRD
XHWR
XCS1882
XINIT0
XINIT1
XDIS_IO
A7
XCS2
XHWR
D0 - D7
A0 - A6
D0 -D7
IC907
D-FF
2 – 9
1D-8D
CLK
XOC
1Q-8Q
19 – 12
1B
2A
1XG
2XG
1A
1Y2
2Y0
IC909
DECODER
Q901
3,25,24,21,23,2,26,1
A7 - A14
10 – 4
A0 - A6
11–13,15–19
I/O1 - I/O8
XCE
XOE
XWE
IC908
S-RAM
XHRD
XHWR
XRST_DVD
XDIS_IO
XHWR
XHRD
XCS_IO
RST_DVD
XDIS
XWR
XRD
XCS
44 – 46
A0 – A2
28 – 30, 33 – 37
D0 – D7
IC11
LOADING/TABLE
MOTOR DRIVE
LOAD_IN
LOAD_OUT
TBLR
TBLL
Q903
Q904
FIN1
RIN1
FIN2
RIN2
OUT1+
OUT1-
OUT2+
OUT2-
M10
(LOADING)
M11
(TRAY)
S200
(TABLE ADDRESSS DETECT)
ROTARY
ENCODER
S1
S2
IC902
I/O EXPANDER
TE
FE
PI
MD2
SENS
LOCK
FOK
GFS
DATA
XLAT
COUT
SCLK
CLOK
MUTE_CD
SQCK
SQSO
SCOR
DOCTRL
SENS_CD
LOCK_CD
FOK_CD
GFS_CD
DATA_CD
LAT_CD
COUT_CD
SCLK_CD
CLOK_CD
MUTE_CD
SQCK
SQSO
SCOR
INIT_DF
LATCH_DF
SHIFT_DF
SCDATA_DF
MODE_DF
AMUTE
INIT
LATCH
SHIFT
DATA
MODE
AMUTE
IC905
RESET
OUT
IN
C
5V
S901
D11
(DISC SENSOR)
Q902(1/2)
D_SENS
BUSY_DP
SDIN
SDOUT
SLK
REQ
IFBUSY
SIN1
IFSOO
IC906
IFSCO
XIFCS
XIFCS
XRST_DP
RST_DP
OUT_SW
OUT_SW_CHG
OPEN
CLOSE
S11
D10
(TABLE SENSOR)
Q902(2/2)
DATA_RF
CLK_RF
MIRR
LDON
MUTE_2D
SP_ON
MUTE_LOAD
SDATA_RF
SDCLOK_RF
MIRR
LDON
MUTE_2D
SP_ON
MUTE_LOAD
MUTE_DSD
XMSLAT
SCK_DSD
SDOUT_DSD
SDIN_DSD
READY_DSD
SHRMUT
XMSLAT
MSCK
MSDATI
MSDATO
SHRRDY
XRST_DSD
RST_DSD
A1OUT
A1OUT
VMOD
RST_CD
PD6
VMOD
XRST_CD
SDEN
TO RF/SERVO SECTION
(Page 13)
TO MAIN SECTION(1/2)
(Page 14)
WMPLCK
IC910
SW
MON_DVD
RF_AD_CE
JIT
GFS_V
RF_AD_CE
JIT
GFS_DVD
IC903
EEPROM
EEP_SIO
EEP_SCL
SDA
SCL
T_SENS
T_SENS
SP_DW
SP_DW
S1022
(IN_SW)
S1023
(OUT_SW)
IN_SW
IN_SW
OUT_SW
OUT_SW
XTAL
EXTAL
X901
20MHz
A1IN
Q381
SW
J381
CONTROL A1 II
TO MAIN SECTION(1/2)
(Page 14)
TO DISPLAY/POWER SECTION
(Page 17)
TO AUDIO SECTION
(Page 16)
G
D
H
N
J
K
L
M
I
O
Q
R

AUDIO SECTION

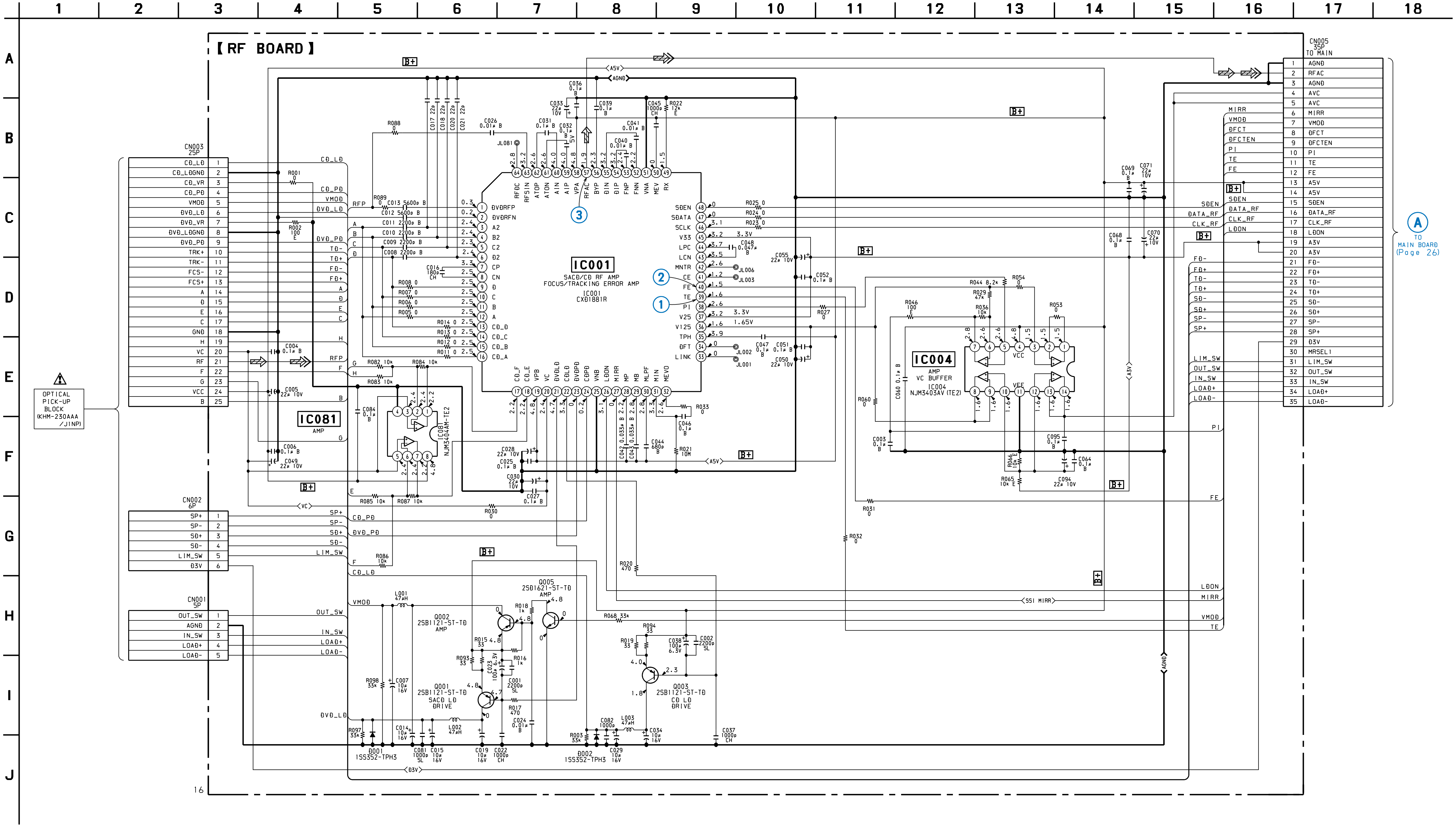

TO RF/SERVO SECTION (Page 13)
B
TO MAIN SECTION(1/2) (Page 14)
P
TO MAIN SECTION(2/2) (Page 15)
R
MDAT
BCLK
LRCK
SDATA L
SDATA R
LT64FSO
256FSO IN
INIT
LATCH
SHIFT
DATA
MODE
AMUTE
IC301
DIGITAL FILTER
48 DATAI
49 BCKI
50 LRCKI
53 SDATA L
52 SDATA R
51 SBCKI
44 LVCK02
30 INIT
28 NREGCLR
31 LATCH
32 SHIFT
33 SCDATA
34 MODE
L1 (–) 1
L1 (+) 3
L2 (+) 6
L2 (–) 8
R2 (–) 17
R2 (+) 19
R1 (+) 22
R1 (–) 24
XIN 13
IC302
3
5
X321
45MHZ
IC100
CURRENT PULSE D/A
28 IN2–
27 IN2+
25 IN1+
24 IN1–
IO1+ 1
IO2– 2
IO1– 4
IO2+ 5
IC200
CURRENT PULSE D/A
28 IN2–
27 IN2+
25 IN1+
24 IN1–
IO1+ 1
IO2– 2
IO1– 4
IO2+ 5
L+
L-
R-
R+
IC101
I-V
CONVERSION
IC201
I-V
CONVERSION
6
7
2
1
Q100
Q101
Q201
Q200
IC102(1/2)
AUDIO FILTER
IC102(2/2)
BUFFER
IC202(1/2)
AUDIO FILTER
IC202(2/2)
BUFFER
3
2
1
6
5
7
R
L
J301
ANALOG OUT
RY350
IC307(1/2)
HEADPHONE
AMP
5
7
IC307(2/2)
HEAD PHONE
AMP
3
1
RV1101-1
PHONE LEVEL
RV1101-2
PHONE LEVEL
J1101
PHONES
Q370
MUTING
Q360
MUTING
Q352
MUTING
CONTROL
Q350
MUTE
Q351
RELAY
DRIVE
• Signal Path
: SACD
: CD

DISPLAY/POWER SECTION


IC1002
DISPLAY CONTROLLER
IC1001
FLUORESCENT
INDICATOR TUBE DRIVE
FL1000
FLUORESCENT
INDICATOR
TUBE
TO MAIN SECTION(2/2)
(Page 15)
Q
IFBSY
XFRRST
D1002
SIN1
IFSO0
IFSCO
XIFCS
47 ACK
30 RESET
50 SOUT
49 SIN
48 SCK
60 REQ
56 SIRCS
45 KEY 3
44 KEY 2
43 KEY 1
42 KEY 0
40 JOG2
39 JOG1
EXTAL 31
XTAL 32
X1000
IC1000
REMOTE
CONTROL
RECEIVER
S1013, 1015, 1017,
1019, 1021
S1000(1/2), 1012, 1014,
1016, 1018, 1020
S1003, 1005, 1007,
1010, 1011
S1004, 1006, 1008
S1009
ROTARY
ENCODER
CP 51
CS 52
DA 53
RESET OUT 46
LED(PAUSE) 67
LED(PLAY) 66
LED(SACD/CD) 65
63 FL CLK (CL)
62 FLT (CE)
64 FL DATA (DI)
61 FL RST
P1 – 34 1 – 34
P35 35
3G – 16G 52 – 39
1G, 2G 53, 54
VFL 35
-31V
F1
F2
Q1001
SEGMENT
DRIVE
Q1000, 1002
GRID
DRIVE
Q1006
LED
DRIVER
D1001
II
Q1005
LED
DRIVER
D1000
►
Q1004
LED
DRIVER
S1000(1/2)
SACD/CD
T901
POWER
TRANSFORMER
D402- 405
Q401
-31V REG
-31V
F1
F2
D406- 409
IC400
+12V
REG
+12V
(M12V)
D432- 433,
D434
C+12V
S1025
POWER
L991
LINE
FILTER
AC
IN
T902
POWER
TRANSFORMER
D+5V
A+5V
IC402
+5V
REG
D+3.3V
A+3.3V
IC401
+3.3V
REG
D410- 413
+5V
(DF+5V)
IC303
+3.3V
REG
+3.3V
IC403
+5V
REG
D414- 417
+12V
IC304
+5V
REG
+5V
IC306
+5V
REG
+5V
IC405
+12V
REG
D422- 425
IC305
-7V
REG
-7V
IC404
-12V
REG
-12V
3
1
2

4-2. SCHEMATIC DIAGRAM RF SECTION

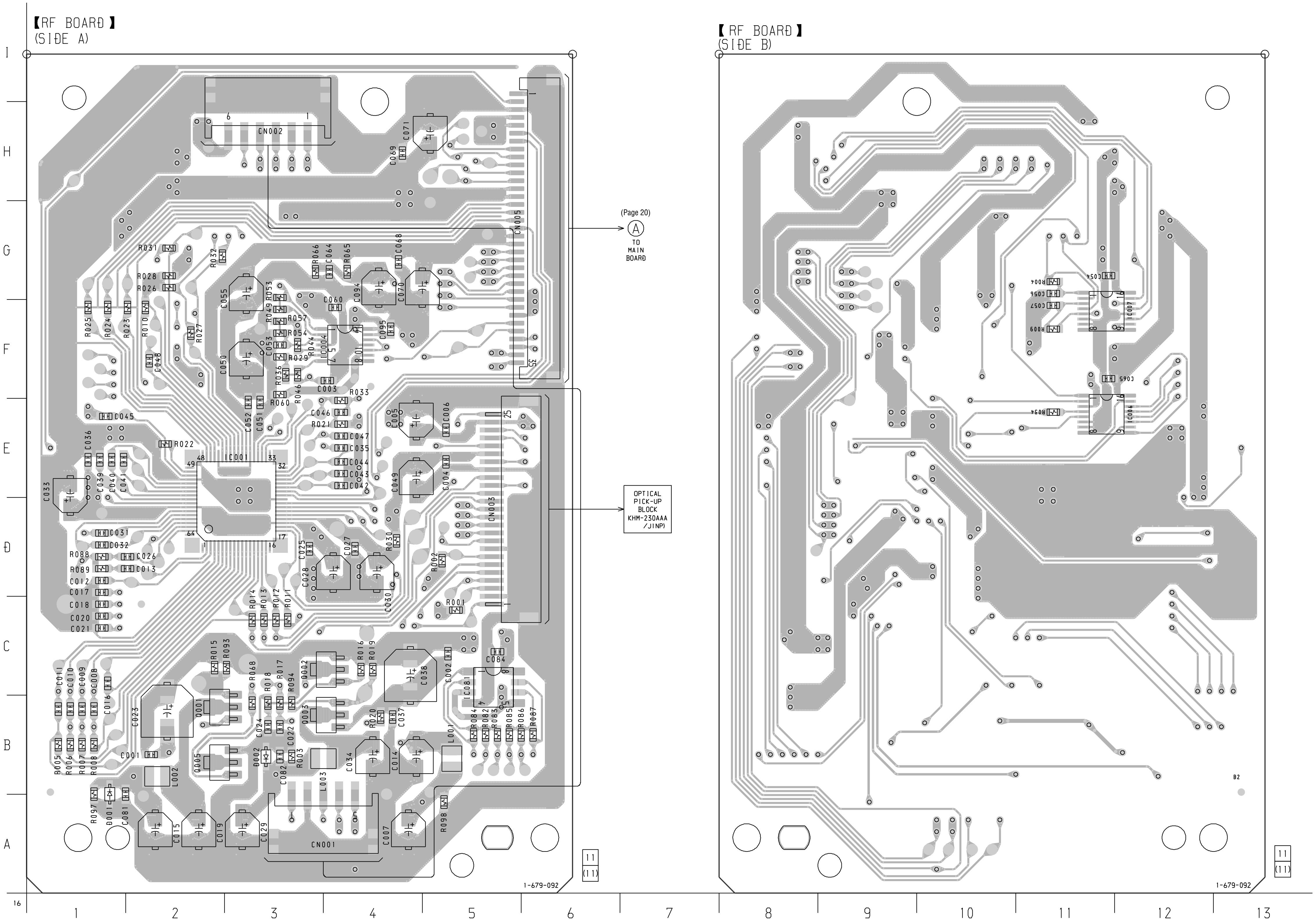
• Refer to page 40 for Waveforms.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
A
B
C
D
E
F
G
H
I
J
【RF BOARD】
OPTICAL PICK-UP BLOCK (KHM-230AAA /J1NP)
CN003 25P
CD_LD
CD_LDGND
CD_VR
CD_PD
VMOD
DVD_LD
DVD_VR
DVD_LDGND
DVD_PD
TRK+
TRK-
FCS-
FCS+
A
B
E
C
GND
H
VC
RF
F
G
VCC
B
IC001
SACD/CD RF AMP
FOCUS/TRACKING ERROR AMP
IC001
CXD1881R
IC081
AMP
IC081
NJM3404AM-TE2
IC004
AMP
VC BUFFER
IC004
NJM3403AV (TE2)
CN002 6P
SP+
SP-
SD+
SD-
LIM_SW
D3V
CN001 5P
OUT_SW
AGND
IN_SW
LOAD+
LOAD-
CN005 35P TO MAIN
AGND
RFAC
AGND
AVC
AVC
MIRR
VMOD
DFCT
DFCTEN
PI
TE
FE
A5V
A5V
SDEN
DATA_RF
CLK_RF
LDON
A3V
A3V
FD-
FD+
TD-
TD+
SD-
SD+
SP-
SP+
D3V
MRSELI
LIM_SW
OUT_SW
IN_SW
LOAD+
LOAD-
A
TO MAIN BOARD (Page 26)
Q005
2SD1621-ST-TD
AMP
Q002
2SB1121-ST-TD
AMP
Q001
2SB1121-ST-TD
SACD LD DRIVE
Q003
2SB1121-ST-TD
CD LD DRIVE
D001
1SS352-TPH3
D002
1SS352-TPH3
L001 47μH
L002 47μH
L003 47μH
A5V
AGND
A3V
D3V
VC
SSI MIRR
B+
1
2
3
16

4-3. PRINTED WIRING BOARD RF SECTION

• Refer to page 12 for Circuit Board Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.


【RF BOARD】
(SIDE A)
【RF BOARD】
(SIDE B)
CN002
CN005
CN003
CN001
IC001
IC004
IC081
Q001
Q002
Q003
Q005
D001
D002
(Page 20)
A
TO MAIN BOARD
OPTICAL PICK-UP BLOCK KHM-230AAA (J1NP)
1-679-092
11
(11)
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13

• **Semiconductor Location**

Ref. No.	Location
D001	A-1
D002	B-3
IC001	E-3
IC004	F-4
IC081	C-5
Q001	B-2
Q002	C-3
Q003	B-3
Q005	B-2

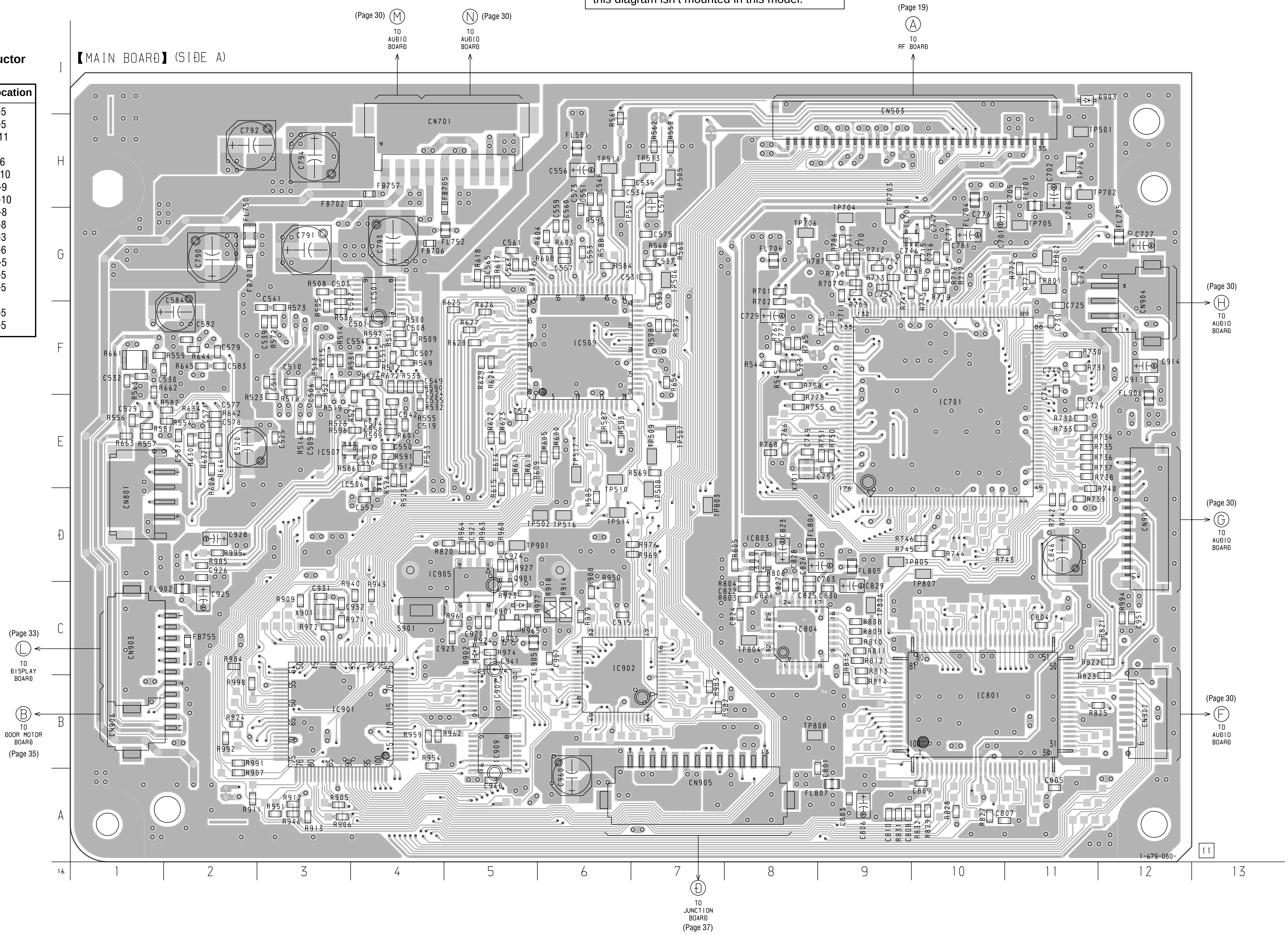
4-4. PRINTED WIRING BOARD MAIN SECTION (SIDE A)

- Refer to page 12 for Circuit Board Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.

- **Semiconductor Location**

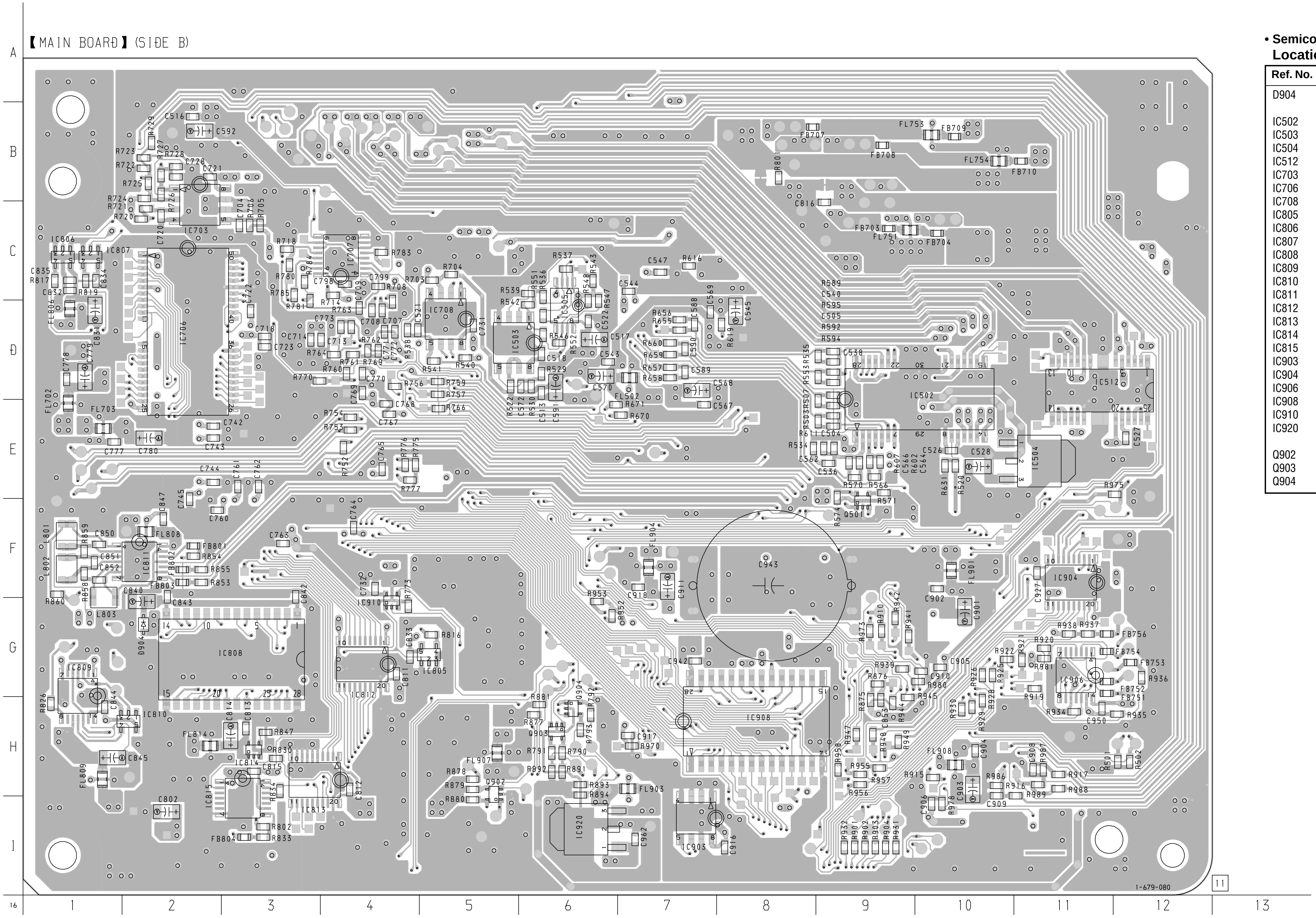
Ref. No.	Location
D901	C-5
D902	C-5
D903	I-11
IC509	F-6
IC701	F-10
IC704	G-9
IC801	B-10
IC803	D-8
IC804	C-8
IC901	B-3
IC902	C-6
IC905	D-5
IC907	B-5
IC909	B-5
Q901	C-5
Q905	C-5


【MAIN BOARD】(SIDE A)
(Page 30) Ⓜ TO AUDIO BOARD
Ⓝ (Page 30) TO AUDIO BOARD
(Page 19) Ⓐ TO RF BOARD
(Page 30) Ⓗ TO AUDIO BOARD
(Page 30) Ⓖ TO AUDIO BOARD
(Page 30) Ⓕ TO AUDIO BOARD
(Page 33) Ⓛ TO DISPLAY BOARD
Ⓑ TO DOOR MOTOR BOARD (Page 35)
Ⓓ TO JUNCTION BOARD (Page 37)
CN701
CN503
CN904
CN901
CN902
CN905
CN906
CN903
CN801
IC509
IC701
IC801
IC804
IC803
IC901
IC902
IC905
IC907
IC909
IC501
IC506
IC507
S901
X901
X701
1-679-080-
11
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13

4-5. PRINTED WIRING BOARD MAIN SECTION (SIDE B)

- Refer to page 12 for Circuit Board Location.

There are a few cases that the part printed on this diagram isn’t mounted in this model.

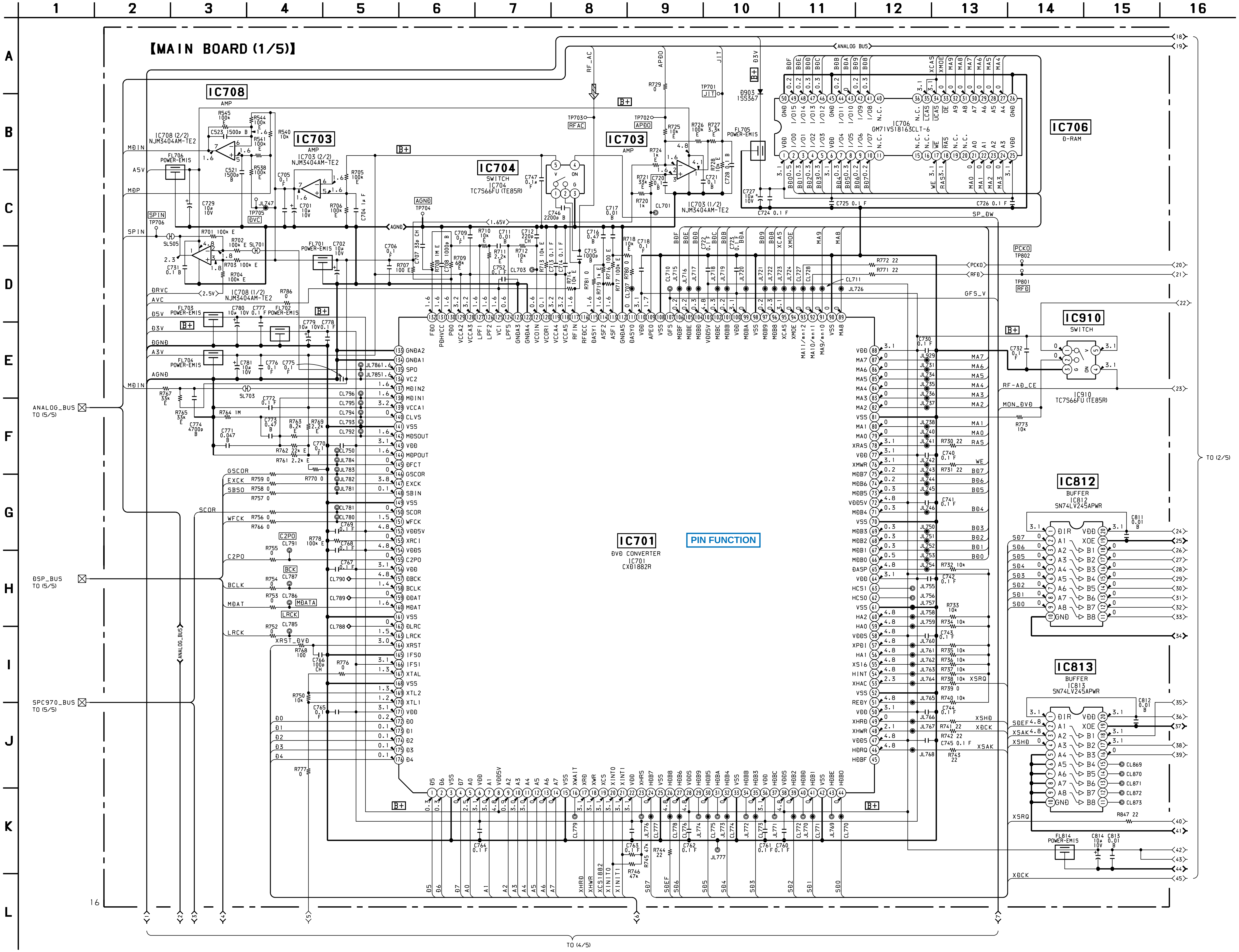

【MAIN BOARD】(SIDE B)
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
7
8
9
10
11
12
13
16
IC502
IC503
IC504
IC512
IC703
IC706
IC708
IC805
IC806
IC807
IC808
IC809
IC810
IC811
IC812
IC813
IC814
IC815
IC903
IC904
IC906
IC908
IC910
IC920
D904
Q902
Q903
Q904
C943
1-679-080
11

• Semiconductor Location

Ref. No.	Location
D904	G-2
IC502	D-9
IC503	D-5
IC504	E-11
IC512	D-11
IC703	C-2
IC706	D-2
IC708	D-5
IC805	G-5
IC806	C-1
IC807	C-1
IC808	G-3
IC809	G-1
IC810	H-2
IC811	C-2
IC812	G-4
IC813	H-3
IC814	H-3
IC815	I-3
IC903	I-7
IC904	F-11
IC906	G-11
IC908	G-8
IC910	G-4
IC920	I-6
Q902	H-5
Q903	H-6
Q904	H-6

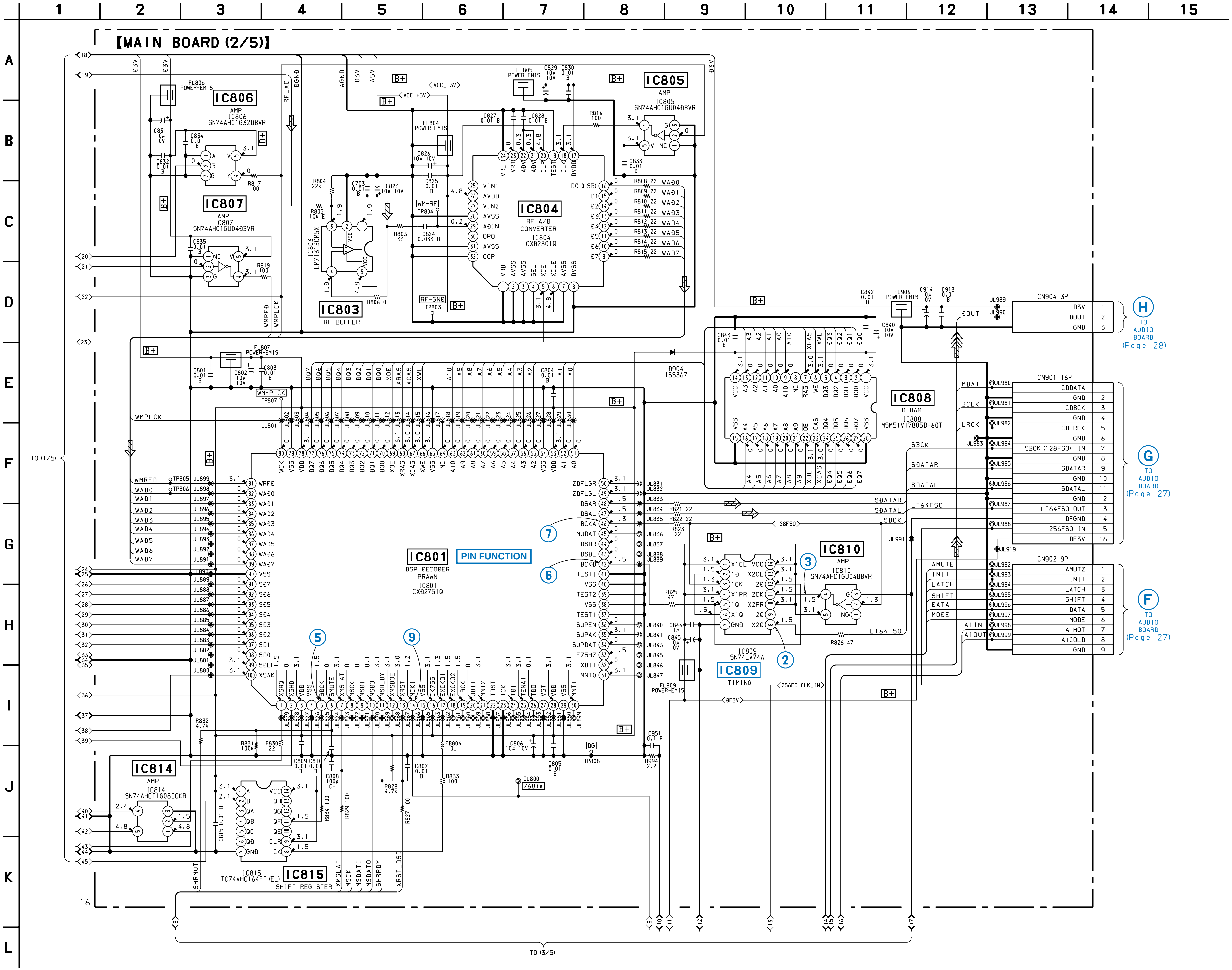
4-6. SCHEMATIC DIAGRAM MAIN SECTION (1/5)

• Refer to page 49 for IC Pin Function.


【MAIN BOARD (1/5)】
IC708 AMP
IC708 (2/2) NJM3404AM-TE2
IC708 (1/2) NJM3404AM-TE2
IC703 AMP
IC703 (2/2) NJM3404AM-TE2
IC703 (1/2) NJM3404AM-TE2
IC704 SWITCH IC704 TC7S66FU (TE85R)
IC706 D-RAM
IC706 GM71VS18163CLT-6
IC701 DVD CONVERTER IC701 CXD1882R
PIN FUNCTION
IC910 SWITCH
IC910 TC7S66FU (TE85R)
IC812 BUFFER IC812 SN74LV245APWR
IC813 BUFFER IC813 SN74LV245APWR
ANALOG BUS
ANALOG_BUS TO (5/5)
DSP_BUS TO (5/5)
SPC970_BUS TO (5/5)
TO (2/5)
TO (4/5)
RF_AC
APDO
JIT
D3V
D903 1SS367
FL705 POWER-EMIS
FL706 POWER-EMIS
FL701 POWER-EMIS
FL703 POWER-EMIS
FL702 POWER-EMIS
FL704 POWER-EMIS
FL814 POWER-EMIS
MDIN
A5V
MDP
SPIN
DRVC
AVC
D5V
D3V
DGND
A3V
AGND
GSCOR
EXCK
SBSO
SCOR
WFCK
C2PO
BCLK
MDAT
LRCK
XRST_DVD
D0
D1
D2
D3
D4
PCKO
RFO
GFS_V
RF-AD_CE
MON_DV
SP_DW
XSHD
XDCK
XSAK
XSRQ
SDEF
B+
AGND
1.65V
2.5V

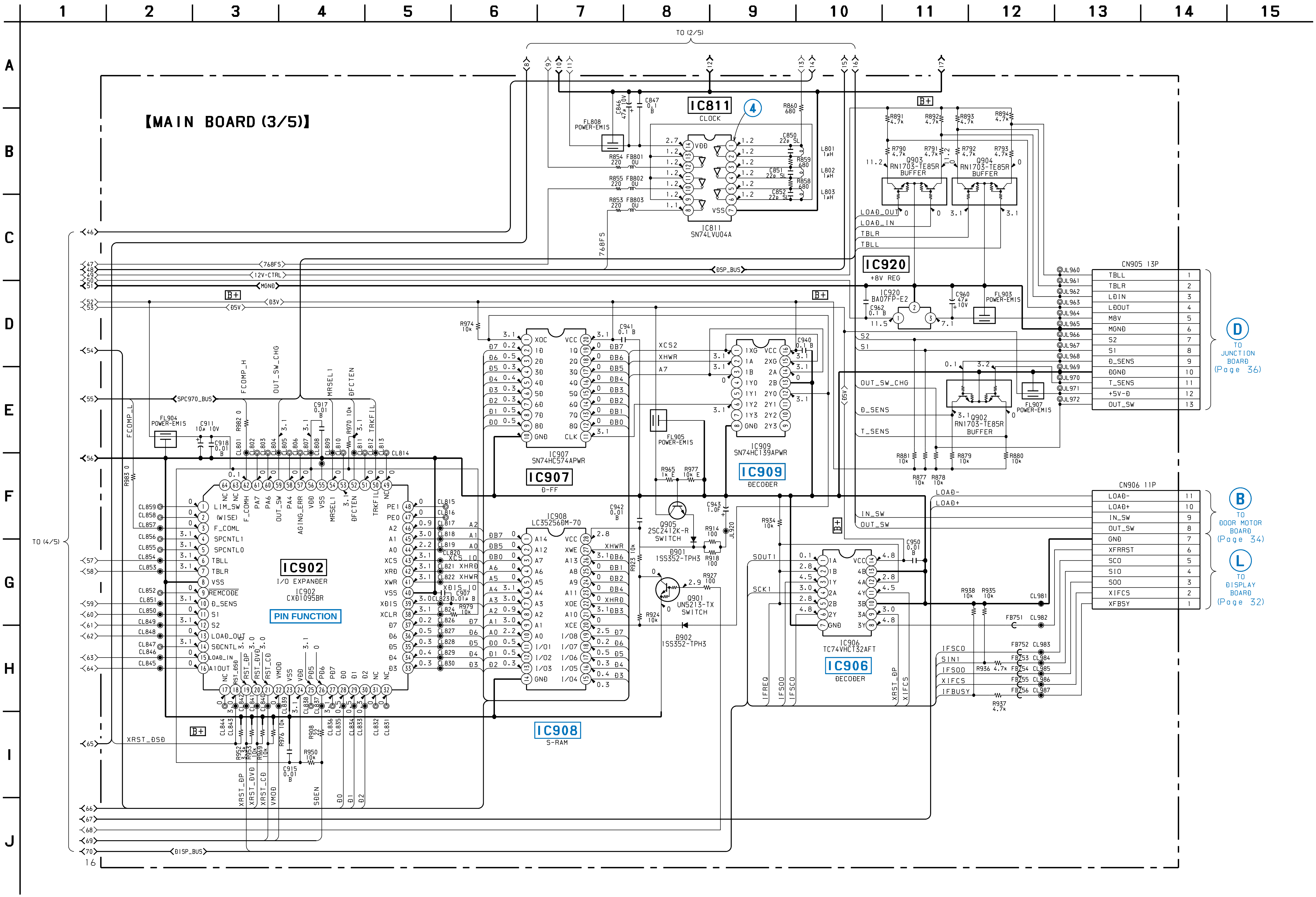
4-7. SCHEMATIC DIAGRAM MAIN SECTION (2/5)

• Refer to page 40 for Waveforms. • Refer to page 41 for IC Block Diagrams. • Refer to page 46 for IC Pin Function.


【MAIN BOARD (2/5)】
IC806
AMP
IC806
SN74AHC1G32DBVR
IC807
AMP
IC807
SN74AHC1GU04DBVR
IC803
RF BUFFER
LM7131BCM5X
IC804
RF A/D
CONVERTER
IC804
CXD2301Q
IC805
AMP
IC805
SN74AHC1GU04DBVR
IC808
D-RAM
IC808
MSM51V17805B-60T
IC801
DSP DECODER
PRAWN
IC801
CXD2751Q
PIN FUNCTION
IC810
AMP
IC810
SN74AHC1GU04DBVR
IC809
SN74LV74A
IC809
TIMING
IC814
AMP
IC814
SN74AHC1G08DCKR
IC815
TC74VHC164FT (EL)
IC815
SHIFT REGISTER
FL805 POWER-EMIS
FL806 POWER-EMIS
FL804 POWER-EMIS
FL807 POWER-EMIS
FL809 POWER-EMIS
FL906 POWER-EMIS
D904
1SS367
CL800
768fs
CN904 3P
D3V
DOUT
GND
TO AUDIO BOARD (Page 28)
CN901 16P
CDDATA
GND
CDBCK
GND
CDLRCK
GND
SBCK (128FSO) IN
GND
SDATAR
GND
SDATAL
GND
LT64FSO OUT
DFGND
256FSO IN
DF3V
TO AUDIO BOARD (Page 27)
CN902 9P
AMUTE
INIT
LATCH
SHIFT
DATA
MODE
A1HOT
A1COLD
GND
TO AUDIO BOARD (Page 27)
TO (1/5)
TO (3/5)
H
G
F
2
3
5
6
7
9
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K L

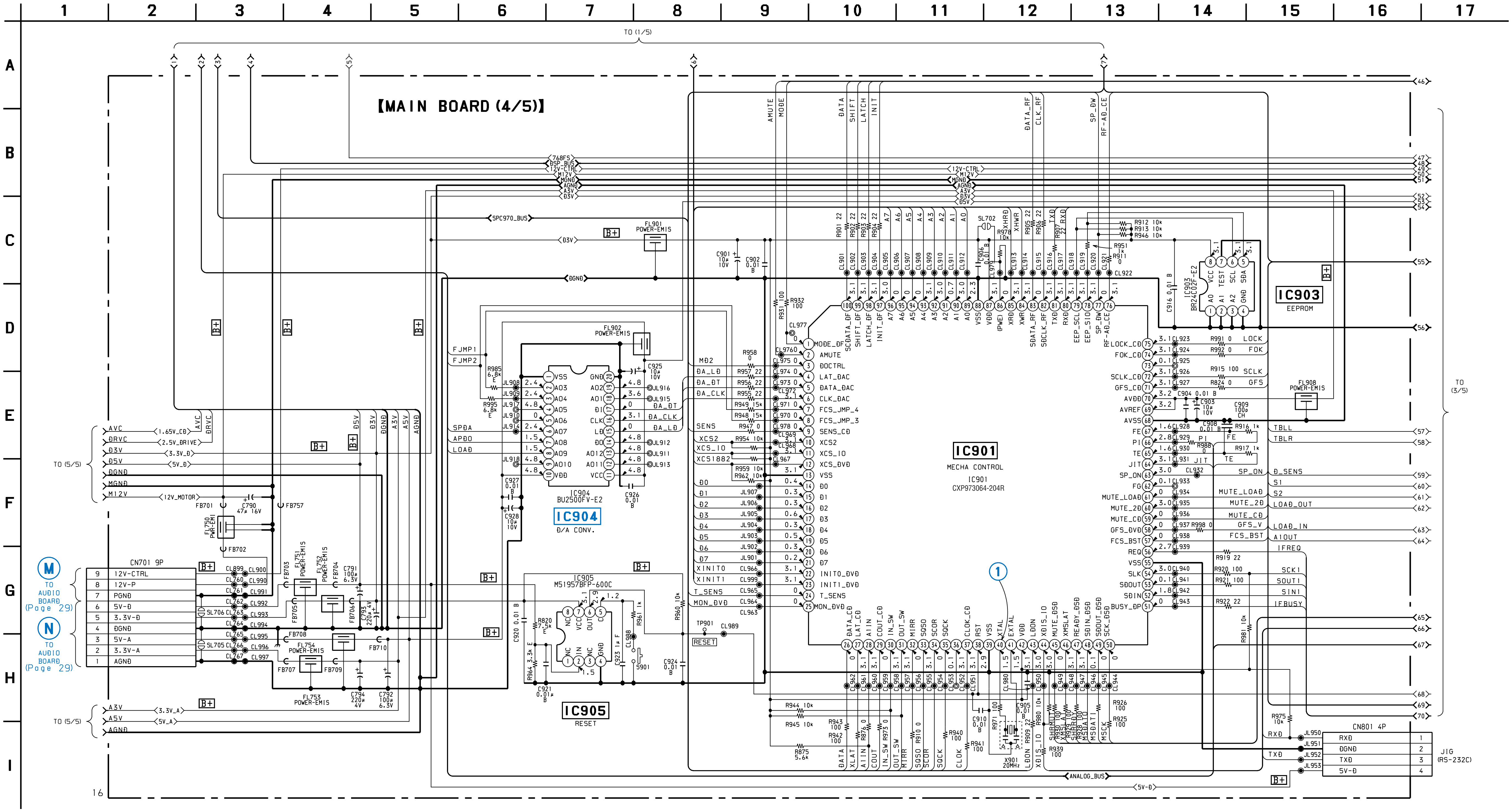
4-8. SCHEMATIC DIAGRAM MAIN SECTION (3/5)

• Refer to page 40 for Waveform. • Refer to page 41 for IC Block Diagrams. • Refer to page 48 for IC Pin Function.


【MAIN BOARD (3/5)】
TO (2/5)
TO (4/5)
IC811
CLOCK
IC811 SN74LVU04A
IC920
+8V REG
IC920 BA07FP-E2
Q903 RN1703-TE85R BUFFER
Q904 RN1703-TE85R BUFFER
Q902 RN1703-TE85R BUFFER
IC907
D-FF
IC907 SN74HC574APWR
IC909
DECODER
IC909 SN74HC139APWR
IC902
I/O EXPANDER
IC902 CXD1095BR
PIN FUNCTION
IC908
S-RAM
IC908 LC352560M-70
IC906
DECODER
IC906 TC74VHCT32AFT
Q905 2SC2412K-R SWITCH
Q901 UN5213-TX SWITCH
D901 1SS352-TPH3
D902 1SS352-TPH3
FL808 POWER-EMIS
FL904 POWER-EMIS
FL905 POWER-EMIS
FL903 POWER-EMIS
FL907 POWER-EMIS
CN905 13P
TBLL
TBLR
LDIN
LDOUT
M8V
MGND
S2
S1
D_SENS
DGND
T_SENS
+5V-D
OUT_SW
D
TO JUNCTION BOARD (Page 36)
CN906 11P
LOAD-
LOAD+
IN_SW
OUT_SW
GND
XFRRST
SCO
SIO
SOO
XIFCS
XFBSY
B
TO DOOR MOTOR BOARD (Page 34)
L
TO DISPLAY BOARD (Page 32)
768FS
12V-CTRL
MGND
D5V
D3V
DSP_BUS
SPC970_BUS
DISP_BUS
XRST_DSD
B+

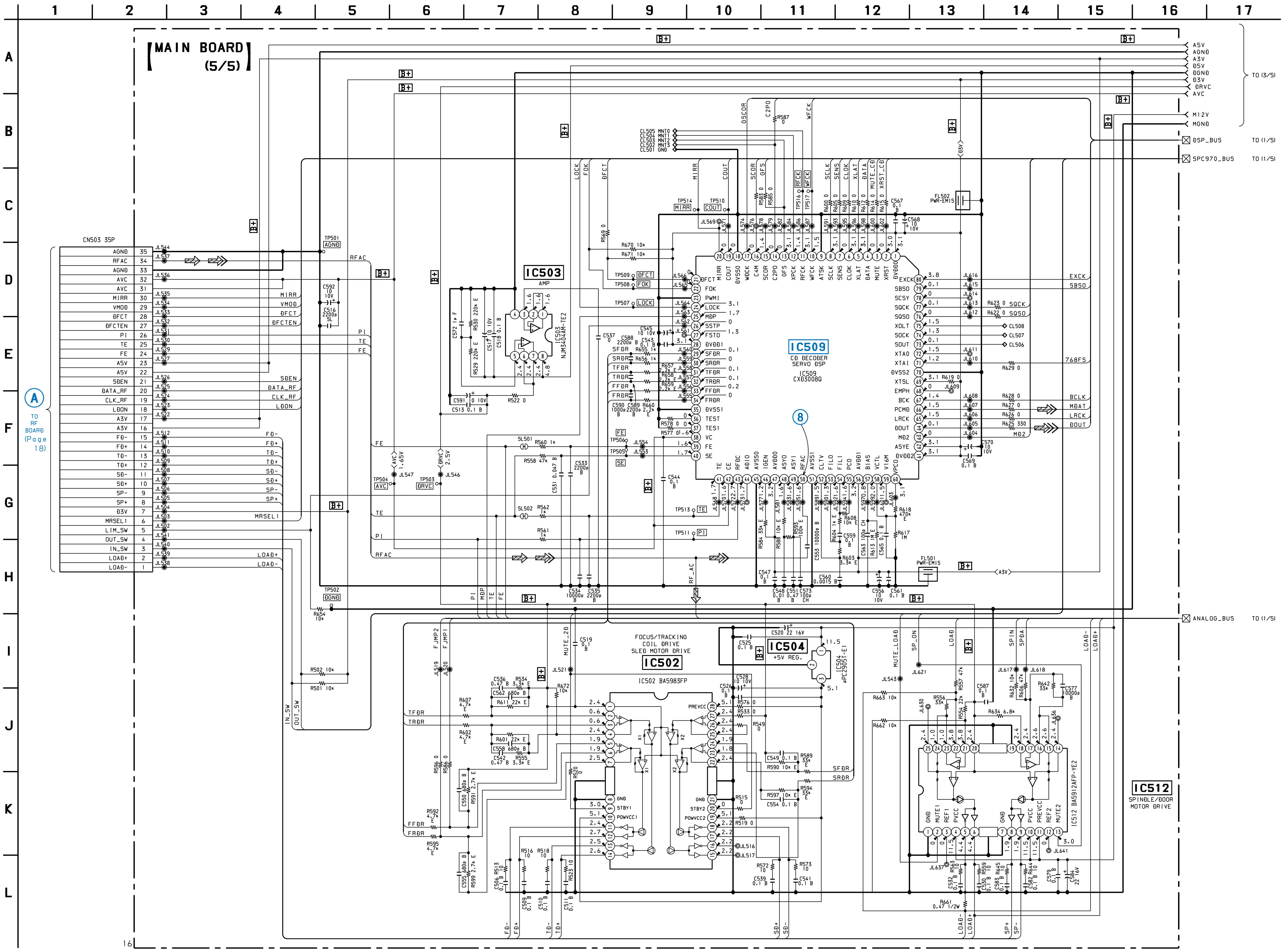
4-9. SCHEMATIC DIAGRAM MAIN SECTION (4/5)

• Refer to page 40 for Waveform. • Refer to page 42 for IC Block Diagrams.


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
A B C D E F G H I
TO (1/5)
【MAIN BOARD (4/5)】
768FS
DSP_BUS
12V-CTRL
M12V
MGND
AGND
A3V
D3V
SPC970_BUS
D3V
DGND
FL901 POWER-EMIS
FL902 POWER-EMIS
FL908 POWER-EMIS
B+
IC901
MECHA CONTROL
IC901 CXP973064-204R
IC904
BU2500FV-E2
D/A CONV.
IC905
M51957BFP-600C
RESET
IC903
BR24C02F-E2
EEPROM
CN701 9P
12V-CTRL
12V-P
PGND
5V-D
3.3V-D
DGND
5V-A
3.3V-A
AGND
M
TO AUDIO BOARD (Page 29)
N
TO AUDIO BOARD (Page 29)
TO (5/5)
AVC
DRVC
D3V
D5V
DGND
MGND
M12V
1.65V_CD
2.5V_DRIVE
3.3V_D
5V_D
12V_MOTOR
A3V
A5V
AGND
3.3V_A
5V_A
TO (3/5)
TBLL
TBLR
D_SENS
S1
S2
LOAD_OUT
LOAD_IN
A1OUT
IFREQ
SCK1
SOUT1
SIN1
IFBUSY
CN801 4P
RXD
DGND
TXD
5V-D
JIG (RS-232C)
ANALOG_BUS
5V-D
RESET
TP901
S901
X901 20MHz
SPDA
APDO
LOAD
FJMP1
FJMP2
MODE_DF
AMUTE
DDCTRL
LAT_DAC
DATA_DAC
CLK_DAC
FCS_JMP_4
FCS_JMP_3
SENS_CD
XCS2
XCS_IO
XCS_DVD
VSS
D0 D1 D2 D3 D4 D5 D6 D7
INIT0_DVD
INIT1_DVD
T_SENS
MON_DVD
LOCK_CD
FOK_CD
SCLK_CD
GFS_CD
AVDD
AVREF
AVSS
FE
PI
TE
JIT
SP_ON
FG
MUTE_LOAD
MUTE_2D
MUTE_CD
GFS_DVD
FCS_BST
REQ
SLK
SDOUT
SDIN
BUSY_DP
LOCK
FOK
SCLK
GFS
AMUTE
MODE
DATA
SHIFT
LATCH
INIT
DATA_RF
CLK_RF
SP_DW
RF-AD_CE
SL702
SL705
SL706
16

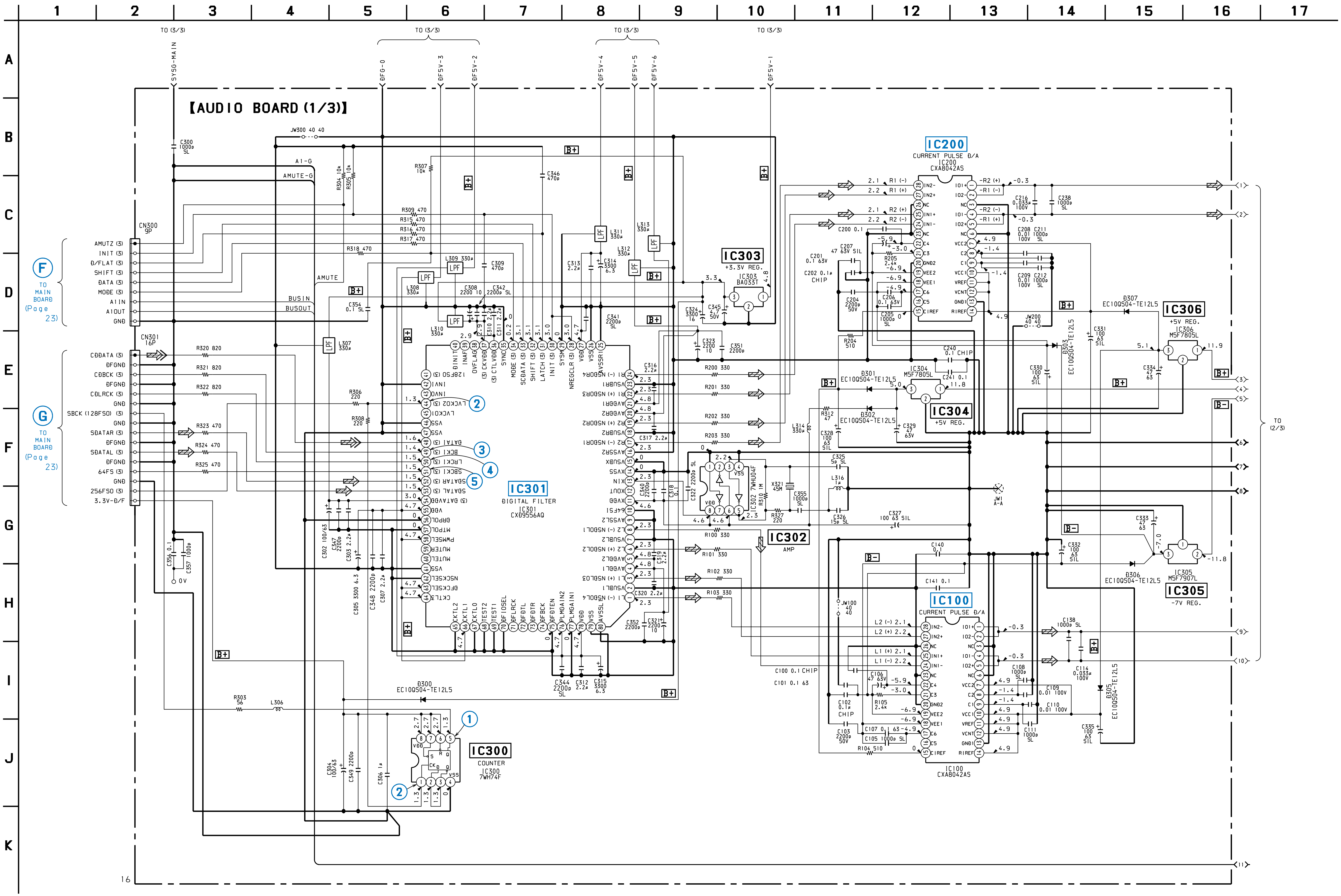
4-10. SCHEMATIC DIAGRAM MAIN SECTION (5/5)

• Refer to page 40 for Waveform. • Refer to page 43 for IC Block Diagrams.


MAIN BOARD (5/5)
CN503 35P
A TO RF BOARD (Page 18)
IC503 AMP NJM3404AM-TE2
IC509 CD DECODER SERVO DSP IC509 CXD3008Q
IC502 FOCUS/TRACKING COIL DRIVE SLED MOTOR DRIVE IC502 BA5983FP
IC504 +5V REG. IC504 μPC29005T-E1
IC512 SPINDLE/DOOR MOTOR DRIVE IC512 BA5912AFP-YE2
FL502 PWR-EMIS
FL501 PWR-EMIS
A5V AGND A3V D5V DGND D3V DRVC AVC TO (3/5)
M12V MGND
DSP_BUS TO (1/5)
SPC970_BUS TO (1/5)
ANALOG_BUS TO (1/5)
AGND RFAC AGND AVC AVC MIRR VMOD DFCT DFCTEN PI TE FE A5V A5V SDEN DATA_RF CLK_RF LDON A3V A3V FD- FD+ TD- TD+ SD- SD+ SP- SP+ D3V MRSEL1 LIM_SW OUT_SW IN_SW LOAD+ LOAD-
EXCK SBSO SQCK SQSO 768FS BCLK MDAT LRCK DOUT MD2
SFDR SRDR TFDR TRDR FFDR FRDR
8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
A B C D E F G H I J K L

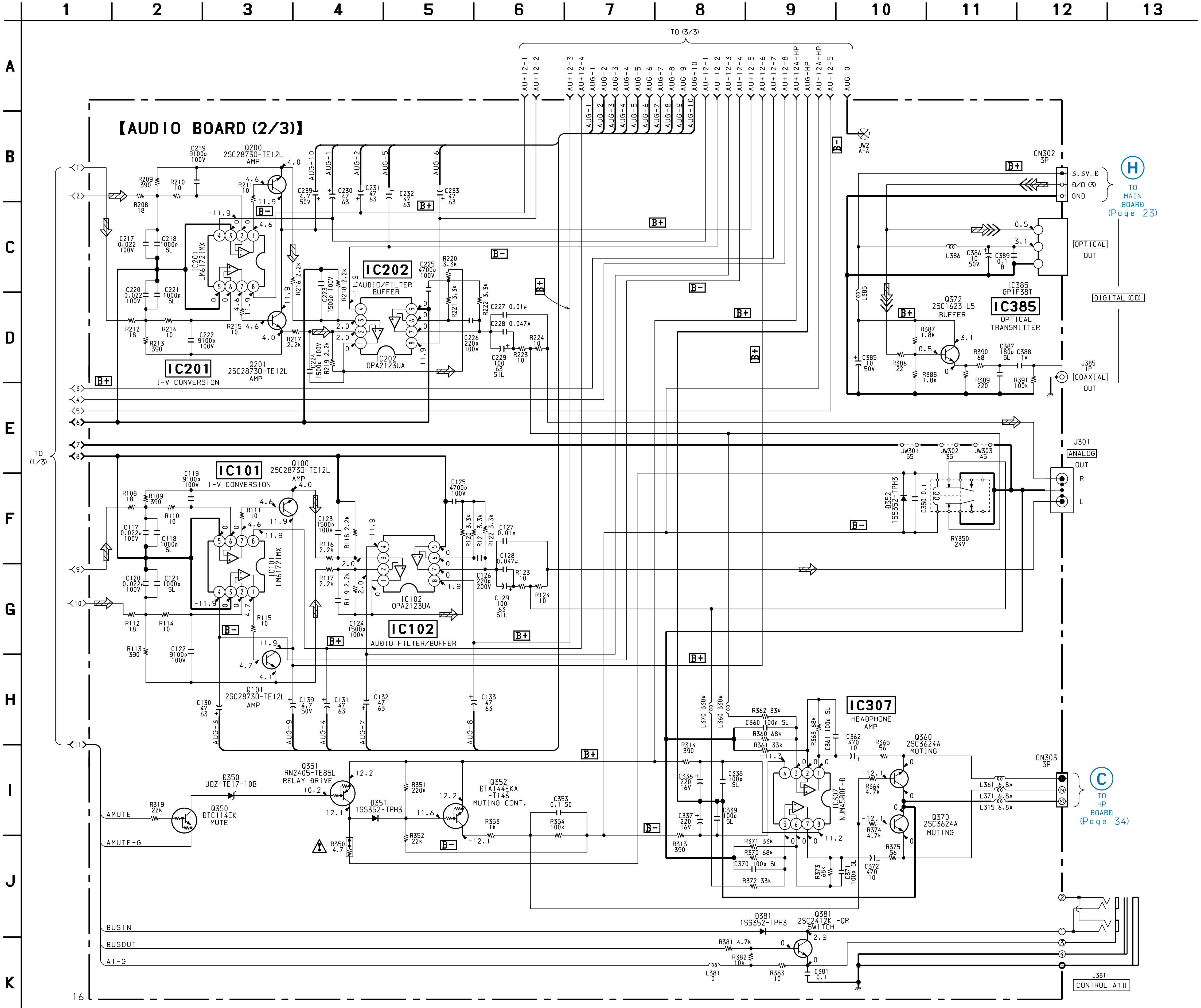
4-11. SCHEMATIC DIAGRAM AUDIO SECTION (1/3)

• Refer to page 40 for Waveforms. • Refer to page 44, 45 for IC Block Diagrams.



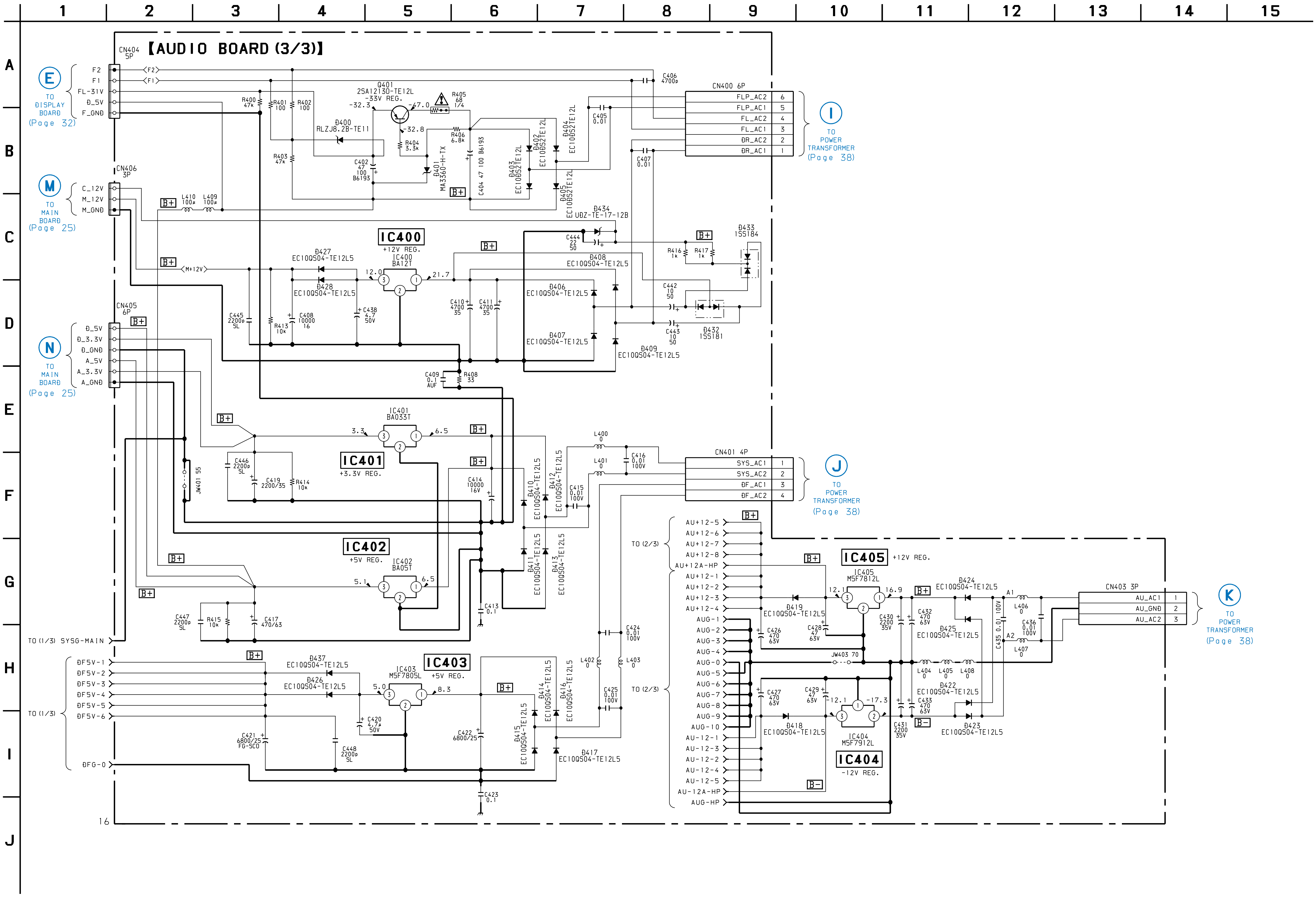
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
TO (3/3)
SYSG-MAIN
DFG-0
DF5V-3
DF5V-2
DF5V-4
DF5V-5
DF5V-6
DF5V-1
【AUDIO BOARD (1/3)】
JW300 40 40
C300 1000p SL
A1-G
AMUTE-G
CN300 9P
AMUTZ (3)
INIT (3)
D/FLAT (3)
SHIFT (3)
DATA (3)
MODE (3)
A1IN
A1OUT
GND
TO MAIN BOARD (Page 23)
CN301 16P
CODATA (3)
DFGND
COBCK (3)
COLRCK (3)
SBCK (128FS0) (3)
SDATAR (3)
SDATAL (3)
64FS (3)
256FS0 (3)
3.3V-D/F
AMUTE
BUSIN
BUSOUT
LPF
IC200
CURRENT PULSE D/A
IC200 CXA8042AS
IC303
+3.3V REG.
IC303 BA033T
IC301
DIGITAL FILTER
IC301 CXD9556AQ
IC302
AMP
IC302 7WHU04F
X321 45M
IC304
+5V REG.
IC304 M5F7805L
IC306
+5V REG.
IC306 M5F7805L
IC305
-7V REG.
IC305 M5F7907L
IC100
CURRENT PULSE D/A
IC100 CXA8042AS
IC300
COUNTER
IC300 7WH74F
D300 EC10QS04-TE12L5
D301 EC10QS04-TE12L5
D302 EC10QS04-TE12L5
D303 EC10QS04-TE12L5
D305 EC10QS04-TE12L5
D306 EC10QS04-TE12L5
D307 EC10QS04-TE12L5
JW1 A-A
JW100 40 40
JW200 40 40
TO (2/3)
B+
B-
①
②
③
④
⑤
0V
16

4-12. SCHEMATIC DIAGRAM AUDIO SECTION (2/3)



1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I J K
TO (3/3)
【AUDIO BOARD (2/3)】
IC201
I-V CONVERSION
LM6172IMX
Q200
2SC2873O-TE12L
AMP
Q201
2SC2873O-TE12L
AMP
IC202
AUDIO/FILTER BUFFER
OPA2123UA
IC101
I-V CONVERSION
LM6172IMX
Q100
2SC2873O-TE12L
AMP
Q101
2SC2873O-TE12L
AMP
IC102
AUDIO FILTER/BUFFER
OPA2123UA
TO (1/3)
CN302
3P
3.3V_D
D/O (3)
GND
H
TO MAIN BOARD
(Page 23)
OPTICAL
OUT
DIGITAL (CD)
IC385
GP1F38T
IC385
OPTICAL TRANSMITTER
Q372
2SC1623-L5
BUFFER
J385
1P
COAXIAL
OUT
J301
ANALOG
OUT
R
L
D352
1SS352-TPH3
RY350
24V
IC307
HEADPHONE AMP
NJM4580E-D
Q360
2SC3624A
MUTING
Q370
2SC3624A
MUTING
CN303
3P
C
TO HP BOARD
(Page 34)
AMUTE
AMUTE-G
Q350
DTC114EK
MUTE
D350
UDZ-TE17-10B
Q351
RN2405-TE85L
RELAY DRIVE
D351
1SS352-TPH3
Q352
DTA144EKA
-T146
MUTING CONT.
BUSIN
BUSOUT
A1-G
D381
1SS352-TPH3
Q381
2SC2412K -QR
SWITCH
J381
CONTROL A1 II
B+
B-
16

4-13. SCHEMATIC DIAGRAM AUDIO SECTION (3/3)

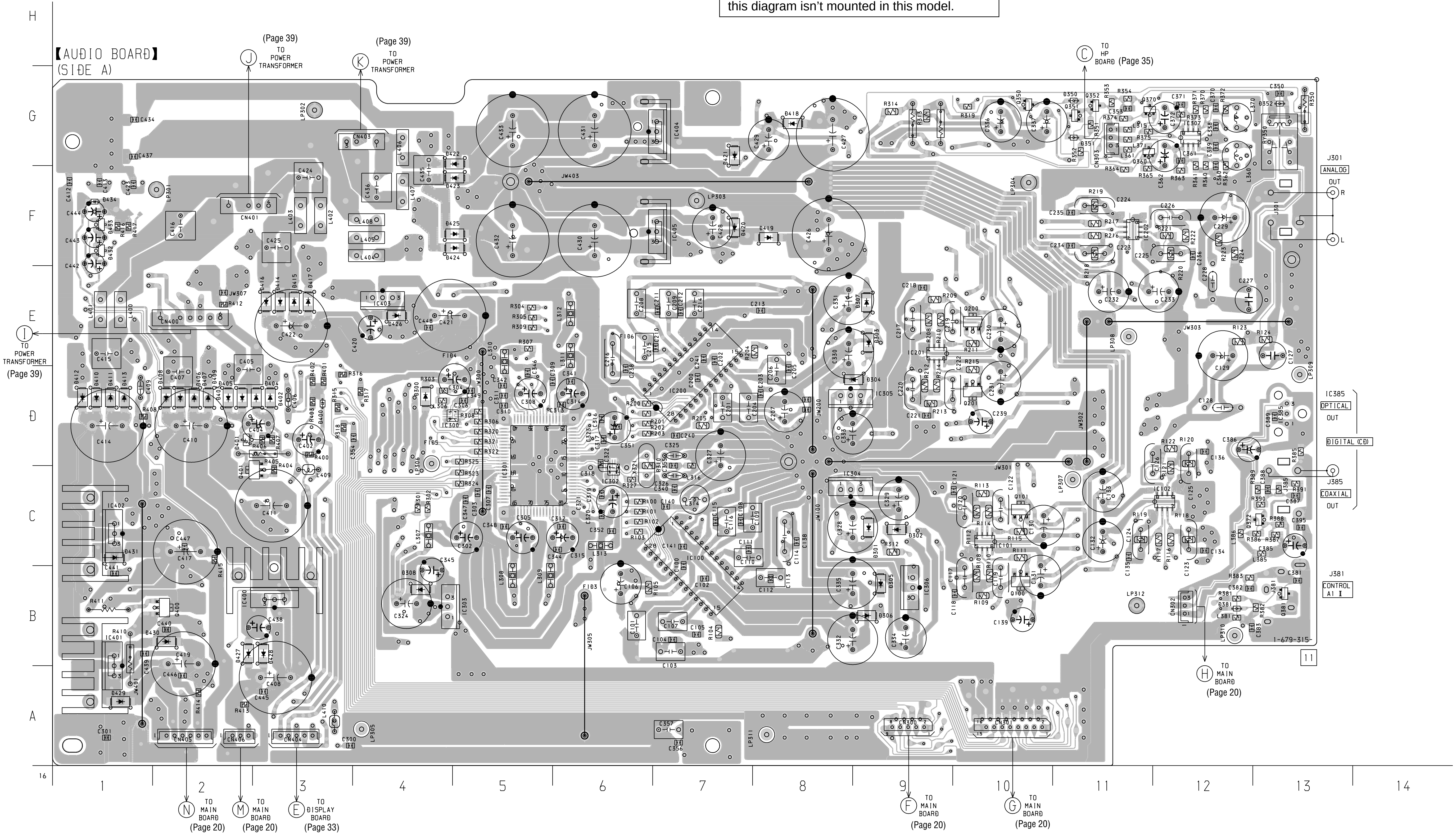


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
【AUDIO BOARD (3/3)】
CN404 5P
F2
F1
FL-31V
D_5V
F_GND
E
TO DISPLAY BOARD
(Page 32)
M
C_12V
M_12V
M_GND
TO MAIN BOARD
(Page 25)
CN406 3P
N
D_5V
D_3.3V
D_GND
A_5V
A_3.3V
A_GND
TO MAIN BOARD
(Page 25)
CN405 6P
TO (1/3) SYSG-MAIN
Q401
2SA1213O-TE12L
-33V REG.
-32.3
-47.0
-32.8
R400 47k
R401 100
R402 100
R403 47k
R404 3.3k
R405 68 1/4
R406 6.8k
D400 RLZJ8.2B-TE11
D401 MA3360-H-TX
C402 47 100 B6193
C404 47 100 B6193
D402 EC10DS2TE12L
D403 EC10DS2TE12L
D404 EC10DS2TE12L
D405 EC10DS2TE12L
C405 0.01
C406 4700p
C407 0.01
CN400 6P
FLP_AC2
FLP_AC1
FL_AC2
FL_AC1
DR_AC2
DR_AC1
I
TO POWER TRANSFORMER
(Page 38)
L410 100μ
L409 100μ
B+
D434 UDZ-TE-17-12B
C444 22 50
D433 1SS184
R416 1k
R417 1k
IC400
+12V REG.
IC400 BA12T
12.0
21.7
D427 EC10QS04-TE12L5
D428 EC10QS04-TE12L5
D408 EC10QS04-TE12L5
D406 EC10QS04-TE12L5
D407 EC10QS04-TE12L5
D409 EC10QS04-TE12L5
C442 10 50
C443 10 50
D432 1SS181
M+12V
C445 2200p SL
R413 10k
C408 10000 16
C438 4.7 50V
C410 4700 35
C411 4700 35
C409 0.1 AUF
R408 33
IC401 BA033T
3.3
6.5
IC401
+3.3V REG.
C446 2200p SL
C419 2200/35
R414 10k
JW401 55
C414 10000 16V
L400 0
L401 0
C416 0.01 100V
C415 0.01 100V
D410 EC10QS04-TE12L5
D411 EC10QS04-TE12L5
D412 EC10QS04-TE12L5
D413 EC10QS04-TE12L5
CN401 4P
SYS_AC1
SYS_AC2
DF_AC1
DF_AC2
J
TO POWER TRANSFORMER
(Page 38)
IC402
+5V REG.
IC402 BA05T
5.1
6.5
C447 2200p SL
R415 10k
C417 470/63
C413 0.1
C424 0.01 100V
TO (2/3)
AU+12-5
AU+12-6
AU+12-7
AU+12-8
AU+12A-HP
AU+12-1
AU+12-2
AU+12-3
AU+12-4
AUG-1
AUG-2
AUG-3
AUG-4
AUG-0
AUG-5
AUG-6
AUG-7
AUG-8
AUG-9
AUG-10
AU-12-1
AU-12-2
AU-12-3
AU-12-4
AU-12-5
AU-12A-HP
AUG-HP
IC405
+12V REG.
IC405 M5F7812L
12.1
16.9
D419 EC10QS04-TE12L5
D424 EC10QS04-TE12L5
D425 EC10QS04-TE12L5
D422 EC10QS04-TE12L5
D423 EC10QS04-TE12L5
D418 EC10QS04-TE12L5
C426 470 63V
C428 47 63V
C430 2200 35V
C432 470 63V
C435 0.01 100V
C436 0.01 100V
A1
A2
L406 0
L407 0
L404 0
L405 0
L408 0
JW403 70
CN403 3P
AU_AC1
AU_GND
AU_AC2
K
TO POWER TRANSFORMER
(Page 38)
C427 470 63V
C429 47 63V
12.1
-17.3
C431 2200 35V
C433 470 63V
B-
IC404 M5F7912L
IC404
-12V REG.
DF5V-1
DF5V-2
DF5V-3
DF5V-4
DF5V-5
DF5V-6
DFG-0
TO (1/3)
D437 EC10QS04-TE12L5
D426 EC10QS04-TE12L5
IC403 M5F7805L
IC403
+5V REG.
5.0
8.3
C420 4.7μ 50V
C421 6800/25 FG-SCD
C448 2200p SL
C422 6800/25
C423 0.1
D414 EC10QS04-TE12L5
D415 EC10QS04-TE12L5
D416 EC10QS04-TE12L5
D417 EC10QS04-TE12L5
L402 0
L403 0
C425 0.01 100V
16

4-14. PRINTED WIRING BOARD AUDIO SECTION (SIDE A)

• Refer to page 12 for Circuit Board Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.

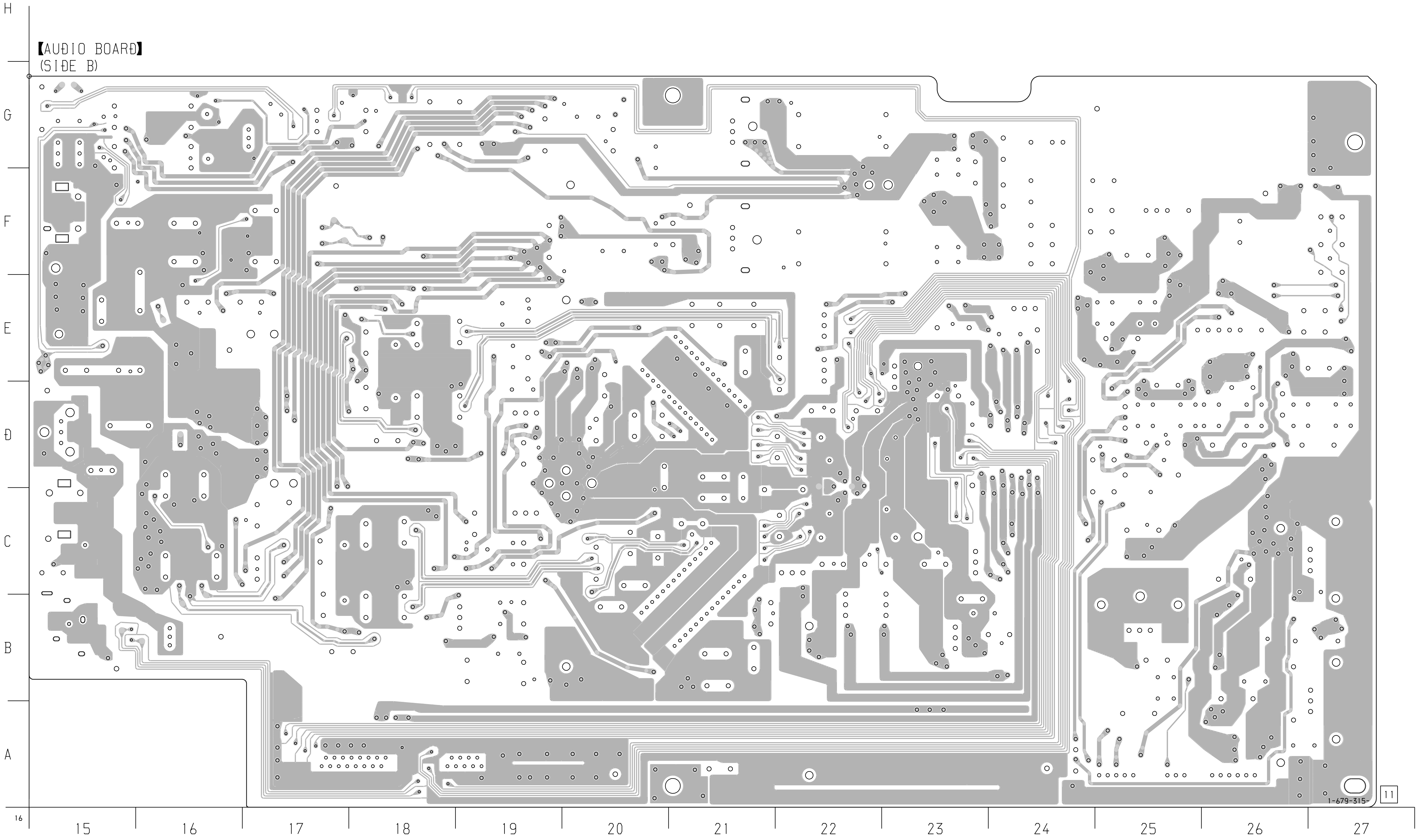

【AUDIO BOARD】
(SIDE A)
J TO POWER TRANSFORMER (Page 39)
K TO POWER TRANSFORMER (Page 39)
C TO HP BOARD (Page 35)
I TO POWER TRANSFORMER (Page 39)
J301 ANALOG OUT R L
IC385 OPTICAL OUT
DIGITAL (CD)
J385 COAXIAL OUT
J381 CONTROL A1 II
1-679-315-
11
H TO MAIN BOARD (Page 20)
N TO MAIN BOARD (Page 20)
M TO MAIN BOARD (Page 20)
E TO DISPLAY BOARD (Page 33)
F TO MAIN BOARD (Page 20)
G TO MAIN BOARD (Page 20)
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D300	D-4	D400	D-3	D411	D-1	D424	F-4	IC102	C-12	IC307	G-12	Q200	E-10	Q162	C-1
D301	C-9	D401	D-2	D412	D-1	D425	F-4	IC200	D-7	IC385	D-13	Q201	D-10	Q163	C-1
D302	C-9	D402	D-3	D413	D-1	D426	E-4	IC201	Q-9	IC400	B-3	Q350	G-10	Q181	B-3
D303	E-9	D403	D-2	D414	E-3	D427	B-2	IC202	F-11	IC401	B-1	Q351	G-11	Q182	B-2
D305	B-9	D404	D-3	D415	E-3	D428	B-3	IC300	D-4	IC402	C-1	Q352	G-11		
D306	B-9	D405	D-2	D416	E-3	D432	F-1	IC301	D-5	IC403	E-4	Q360	G-11		
D307	E-9	D406	D-2	D417	E-3	D433	F-1	IC302	C-6	IC404	G-7	Q370	G-11		
D350	G-11	D407	D-2	D418	G-8	D434	F-1	IC303	B-4	IC405	F-7	Q372	C-13		
D351	G-11	D408	D-2	D419	F-8			IC304	C-8			Q381	B-13		
D352	G-13	D409	D-2	D422	F-4	IC100	B-7	IC305	D-8	Q100	B-10	Q401	C-3		
D381	B-12	D410	D-1	D423	F-4	IC101	C-10	IC306	B-9	Q101	C-10	Q104	C-8		

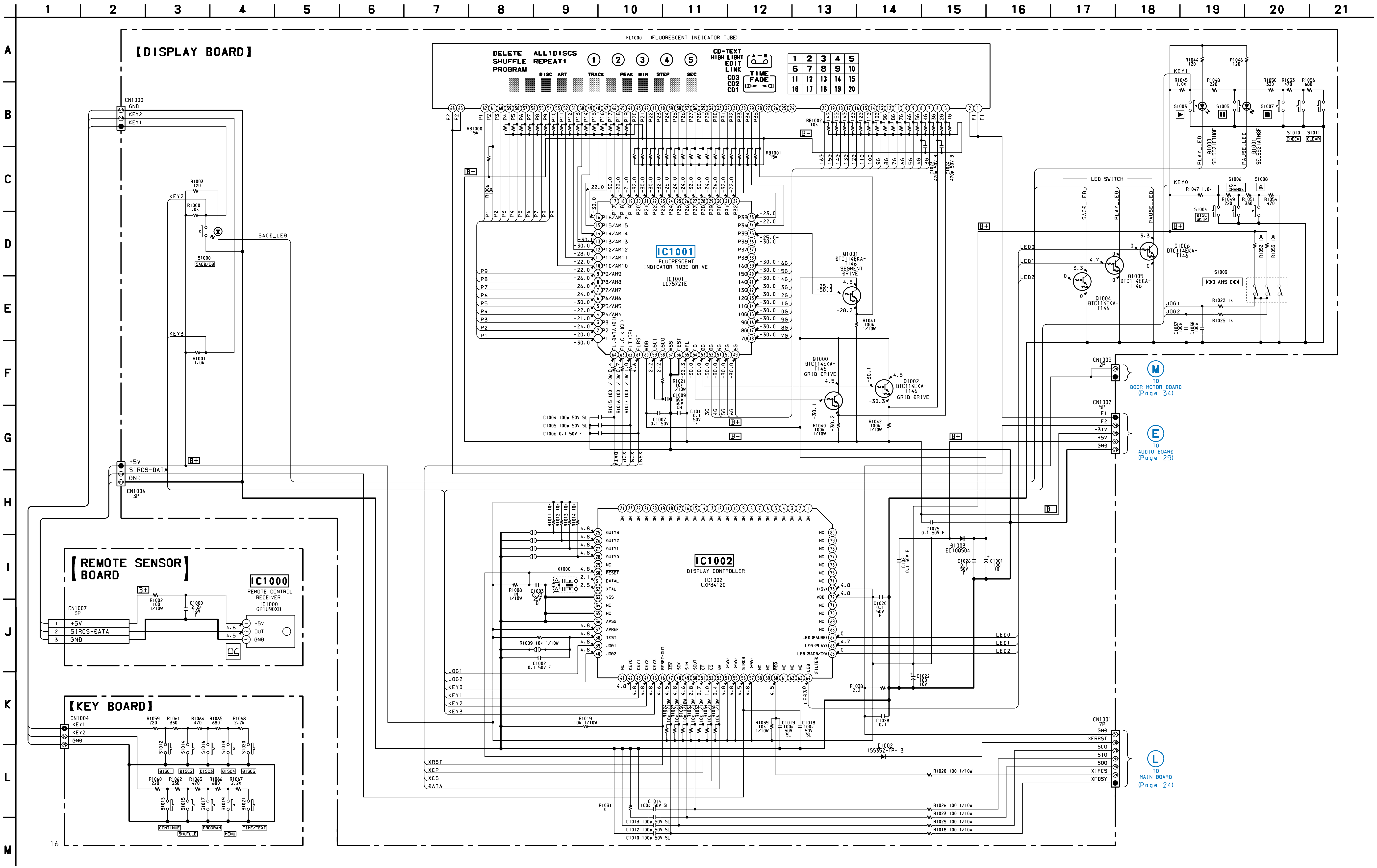
4-15. PRINTED WIRING BOARD AUDIO SECTION (SIDE B)

• Refer to page 12 for Circuit Board Location.


【AUDIO BOARD】
(SIDE B)
H
G
F
E
D
C
B
A
16
15
16
17
18
19
20
21
22
23
24
25
26
27
1-679-315-
11

4-16. SCHEMATIC DIAGRAM DISPLAY SECTION

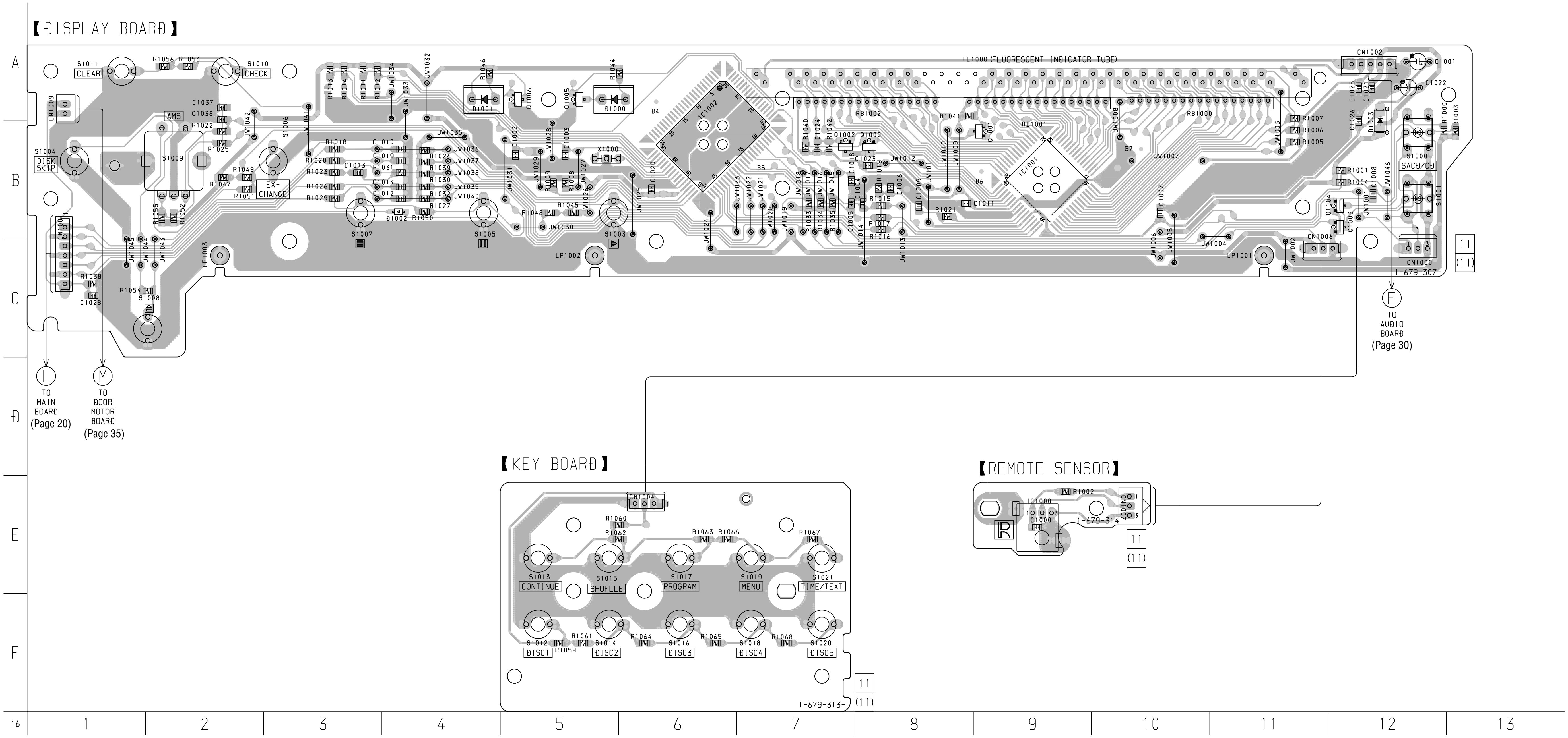
• Refer to page 45 for IC Block Diagrams.



[DISPLAY BOARD]
FL1000 (FLUORESCENT INDICATOR TUBE)
DELETE ALL1DISCS
SHUFFLE REPEAT1
PROGRAM
DISC ART TRACK PEAK MIN STEP SEC
CD-TEXT
HIGH LIGHT
EDIT
LINK
TIME
FADE
CD3 CD2 CD1
IC1001
FLUORESCENT INDICATOR TUBE DRIVE
IC1001 LC75721E
IC1002
DISPLAY CONTROLLER
IC1002 CXP84120
Q1001 DTC114EKA-T146 SEGMENT DRIVE
Q1000 DTC114EKA-T146 GRID DRIVE
Q1002 DTC114EKA-T146 GRID DRIVE
Q1004 DTC114EKA-T146
Q1005 DTC114EKA-T146
Q1006 DTC114EKA-T146
LED SWITCH
SACD_LED
PLAY_LED
PAUSE_LED
D1000 SEL5521CTHBF
D1001 SEL5921ATHBF
S1000 SACD/CD
S1003
S1005
S1007
S1010 CHECK
S1011 CLEAR
S1004 DISC SKIP
S1006 EX-CHANGE
S1008
S1009 AMS
CN1000
CN1006 3P
CN1009 2P
CN1002 5P
CN1001 7P
M TO DOOR MOTOR BOARD (Page 34)
E TO AUDIO BOARD (Page 29)
L TO MAIN BOARD (Page 24)
REMOTE SENSOR BOARD
IC1000
REMOTE CONTROL RECEIVER
IC1000 GP1U90XB
CN1007 3P
+5V
SIRCS-DATA
GND
[KEY BOARD]
CN1004
KEY1
KEY2
DISC1 DISC2 DISC3 DISC4 DISC5
CONTINUE SHUFFLE PROGRAM MENU TIME/TEXT
X1000
D1003 EC10QS04
D1002 1SS352-TPH 3
XRST
XCP
XCS
DATA
XFRRST
SCO
SIO
SOO
XIFCS
XFBSY
JOG1
JOG2
KEY0
LED0
LED1
LED2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
A B C D E F G H I J K L M

4-17. PRINTED WIRING BOARD DISPLAY SECTION

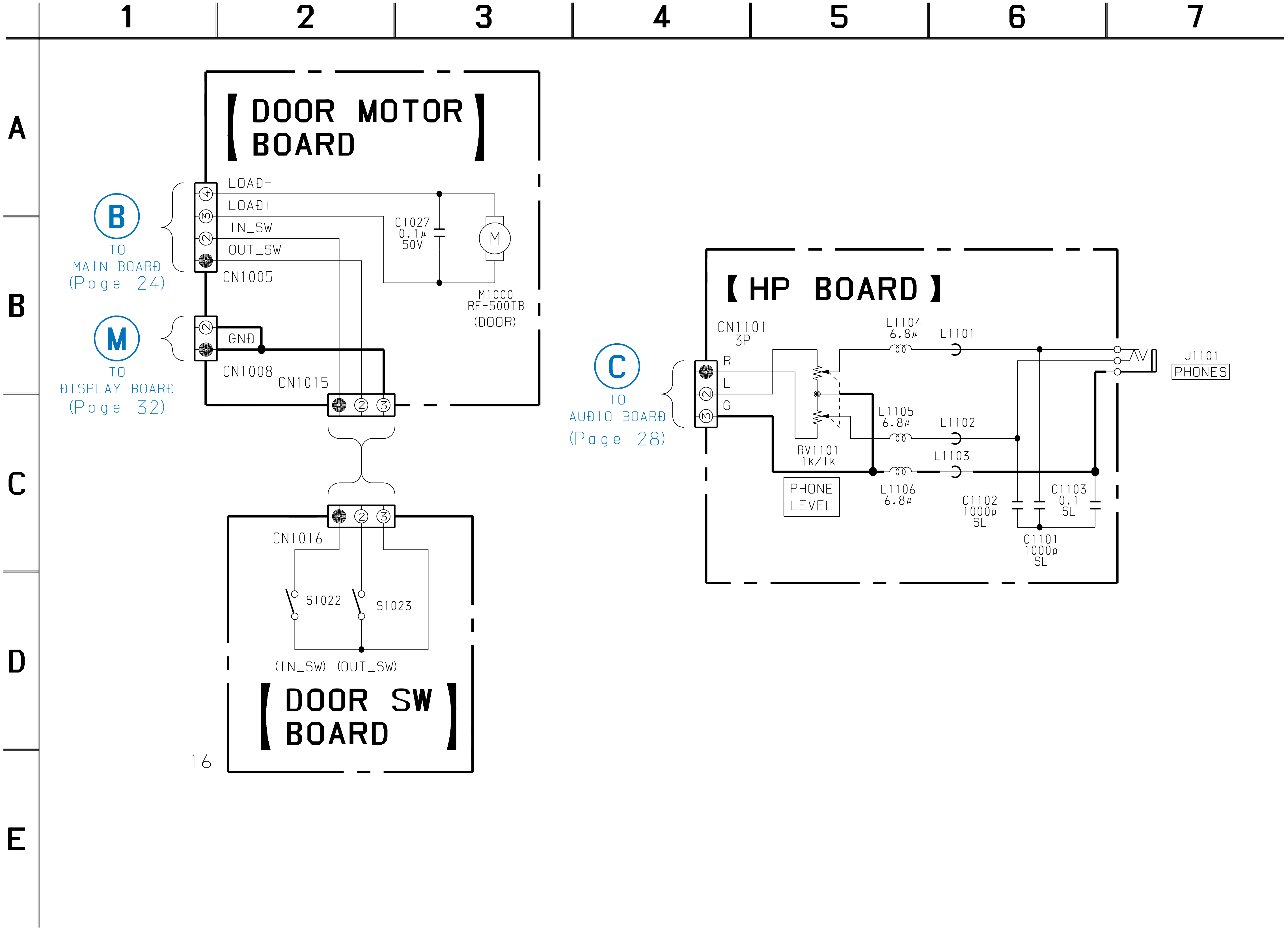
• Refer to page 12 for Circuit Board Location.


【DISPLAY BOARD】
FL1000 (FLUORESCENT INDICATOR TUBE)
CLEAR
CHECK
AMS
DISC SKIP
EX-CHANGE
SACD/CD
CN1000
CN1002
CN1006
IC1001
IC1002
1-679-307-
11
(11)
L
TO MAIN BOARD
(Page 20)
M
TO DOOR MOTOR BOARD
(Page 35)
E
TO AUDIO BOARD
(Page 30)
【KEY BOARD】
CN1004
CONTINUE
SHUFLLE
PROGRAM
MENU
TIME/TEXT
DISC1
DISC2
DISC3
DISC4
DISC5
1-679-313-
11
(11)
【REMOTE SENSOR】
IC1000
CN1005
1-679-314-
11
(11)
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
11
12
13

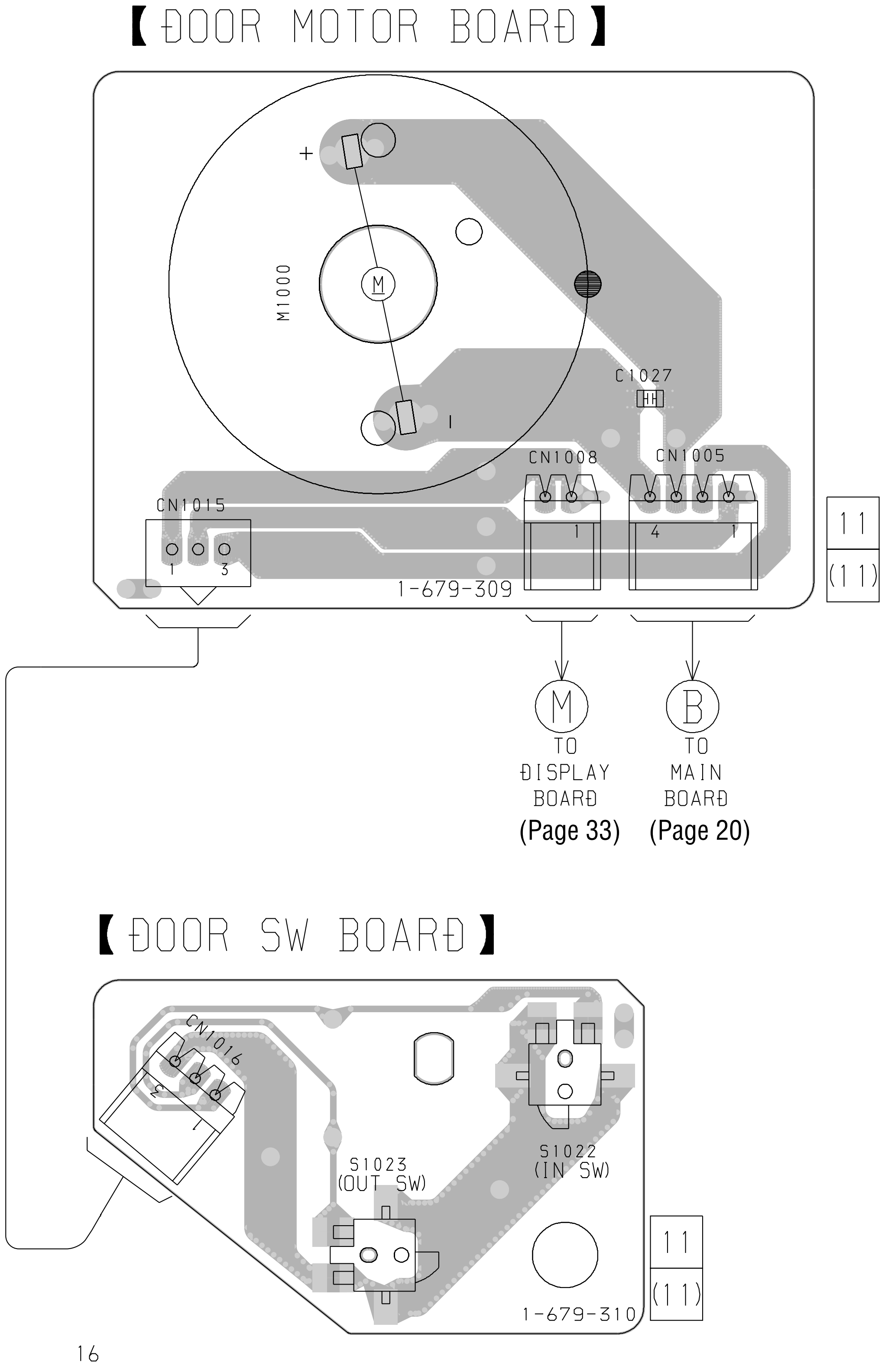
• Semiconductor Location

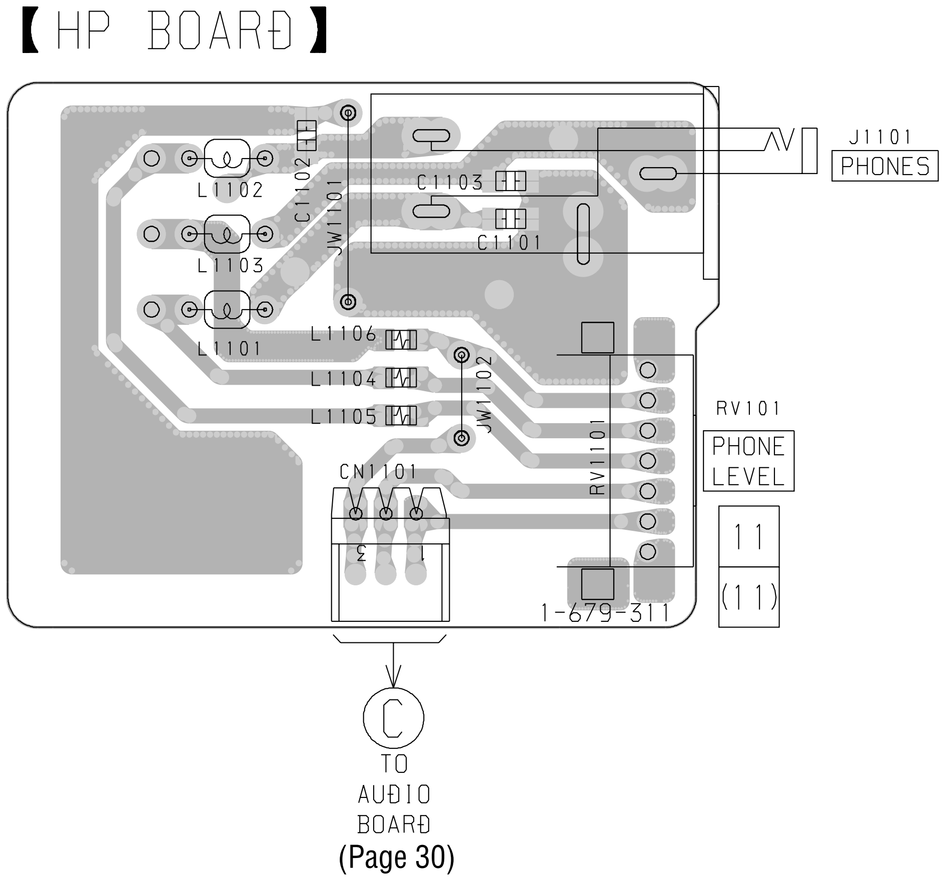
Ref. No.	Location
D1000	A-5
D1001	A-4
D1002	B-4
D1003	B-12
IC1001	B-9
IC1002	B-6
Q1000	B-8
Q1001	B-9
Q1002	B-7
Q1004	B-12
Q1005	A-5
Q1006	A-5

4-18. SCHEMATIC DIAGRAM HP SECTION

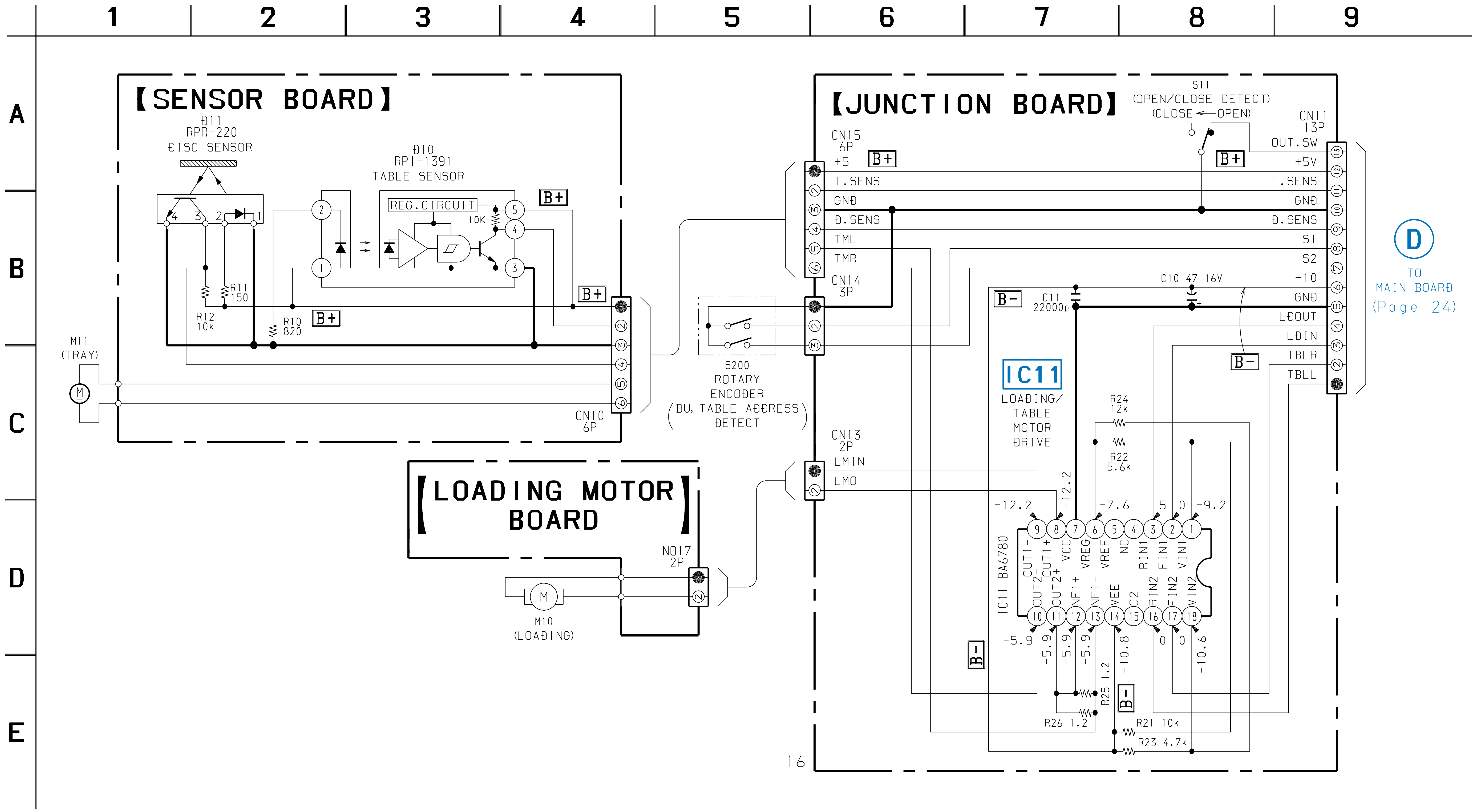

1
2
3
4
5
6
7
A
B
C
D
E
DOOR MOTOR BOARD
LOAD-
LOAD+
IN_SW
OUT_SW
CN1005
C1027
0.1μ
50V
M
M1000
RF-500TB
(DOOR)
B
TO
MAIN BOARD
(Page 24)
M
TO
DISPLAY BOARD
(Page 32)
GND
CN1008
CN1015
CN1016
S1022
S1023
(IN_SW) (OUT_SW)
DOOR SW BOARD
16
HP BOARD
CN1101
3P
R
L
G
C
TO
AUDIO BOARD
(Page 28)
L1104
6.8μ
L1101
L1105
6.8μ
L1102
L1103
L1106
6.8μ
RV1101
1k/1k
PHONE LEVEL
C1102
1000p
SL
C1103
0.1
SL
C1101
1000p
SL
J1101
PHONES

4-19. PRINTED WIRING BOARD HP SECTION • Refer to page 12 for Circuit Board Location.

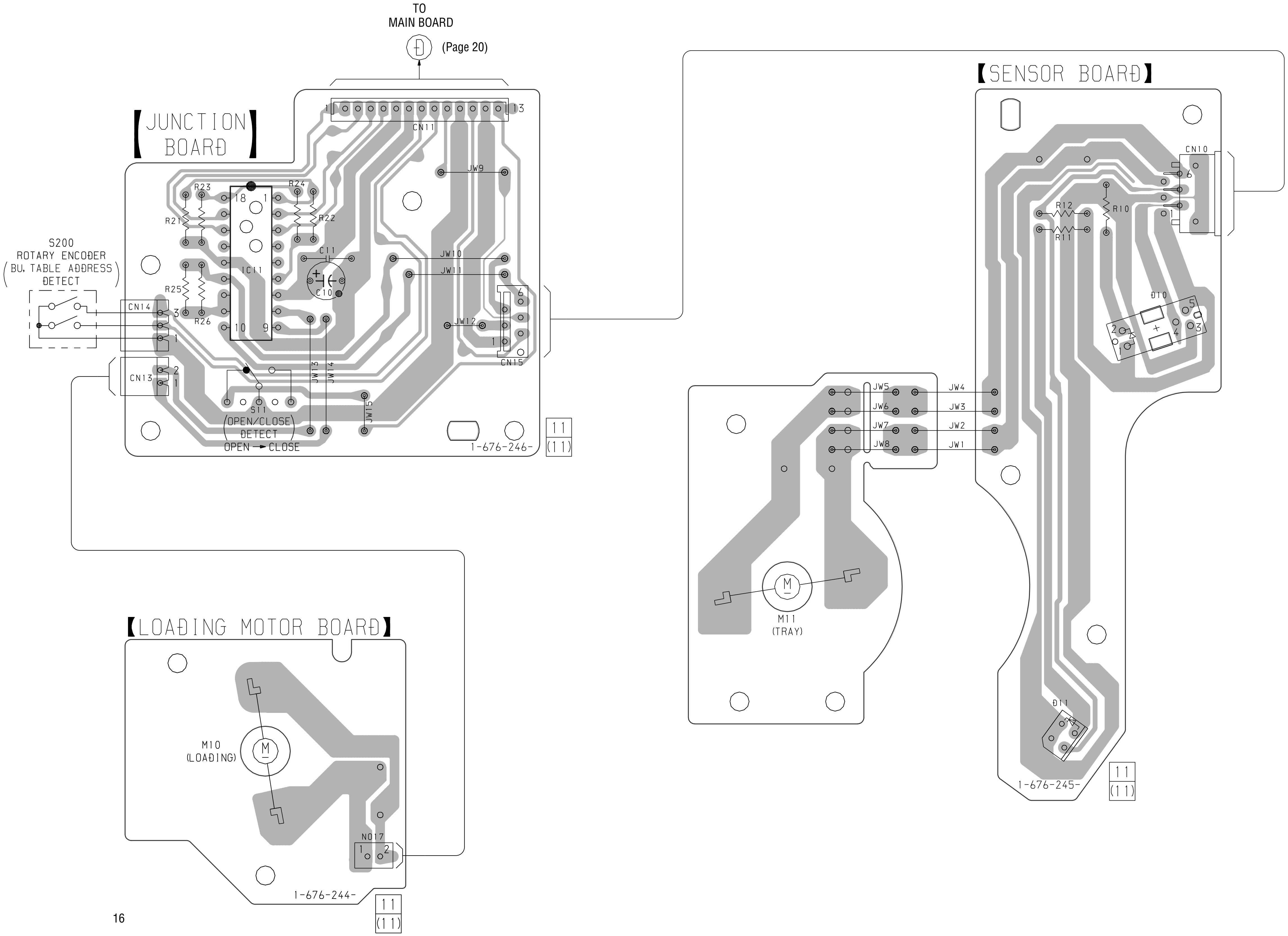

【DOOR MOTOR BOARD】
M1000
+
M
C1027
CN1008
CN1005
CN1015
1
3
1
4
1
1-679-309
11
(11)
M
TO DISPLAY BOARD
(Page 33)
B
TO MAIN BOARD
(Page 20)
【DOOR SW BOARD】
CN1016
3
1
S1023
(OUT SW)
S1022
(IN SW)
1-679-310
11
(11)
16


【HP BOARD】
J1101
PHONES
C1103
C1101
L1102
L1103
L1101
C1102
JW1101
L1106
L1104
L1105
JW1102
RV1101
RV101
PHONE LEVEL
CN1101
3
1
1-679-311
11
(11)
C
TO AUDIO BOARD
(Page 30)

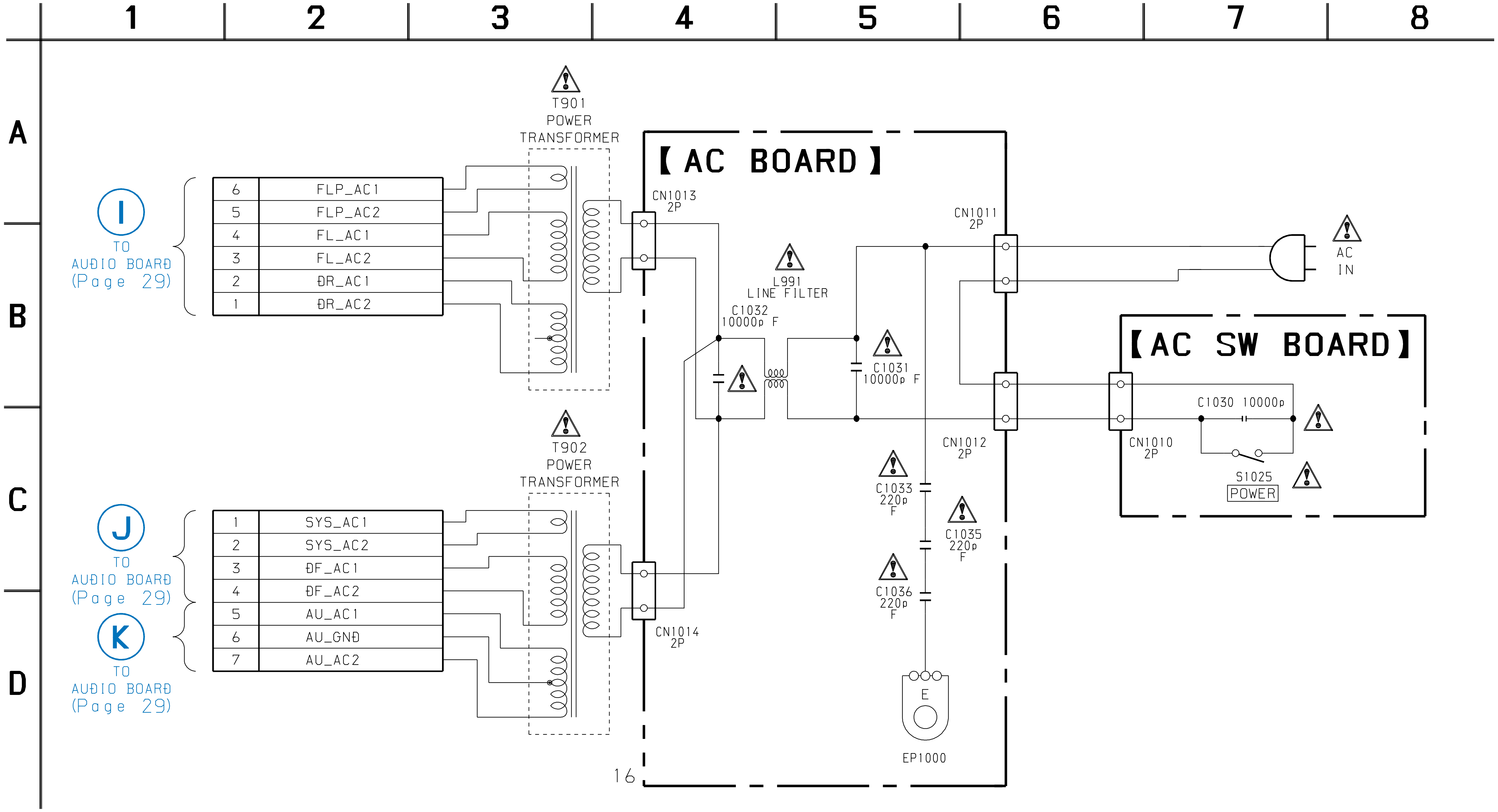
4-20. SCHEMATIC DIAGRAM SENSOR SECTION • Refer to page 45 for IC Block Diagram.


1
2
3
4
5
6
7
8
9
A
B
C
D
E
【SENSOR BOARD】
D11
RPR-220
DISC SENSOR
D10
RPI-1391
TABLE SENSOR
REG.CIRCUIT
10k
B+
R11
150
R12
10k
R10
820
M11
(TRAY)
CN10
6P
S200
ROTARY
ENCODER
(BU, TABLE ADDRESS DETECT)
【LOADING MOTOR BOARD】
NO17
2P
M10
(LOADING)
【JUNCTION BOARD】
S11
(OPEN/CLOSE DETECT)
(CLOSE ←— OPEN)
CN11
13P
CN15
6P
+5
T.SENS
GND
D.SENS
TML
TMR
CN14
3P
OUT.SW
+5V
S1
S2
-10
LDOUT
LDIN
TBLR
TBLL
C10 47 16V
C11
22000p
B−
IC11
LOADING/
TABLE
MOTOR
DRIVE
R24
12k
R22
5.6k
CN13
2P
LMIN
LMO
IC11 BA6780
OUT1−
OUT1+
VCC
VREG
VREF
NC
RIN1
FIN1
VIN1
OUT2−
OUT2+
NF1+
NF1−
VEE
C2
RIN2
FIN2
VIN2
-12.2
-7.6
5
0
-9.2
-5.9
-10.8
-10.6
R25 1.2
R26 1.2
R21 10k
R23 4.7k
16
D
TO
MAIN BOARD
(Page 24)

4-21. PRINTED WIRING BOARD SENSOR SECTION • Refer to page 12 for Circuit Board Location.

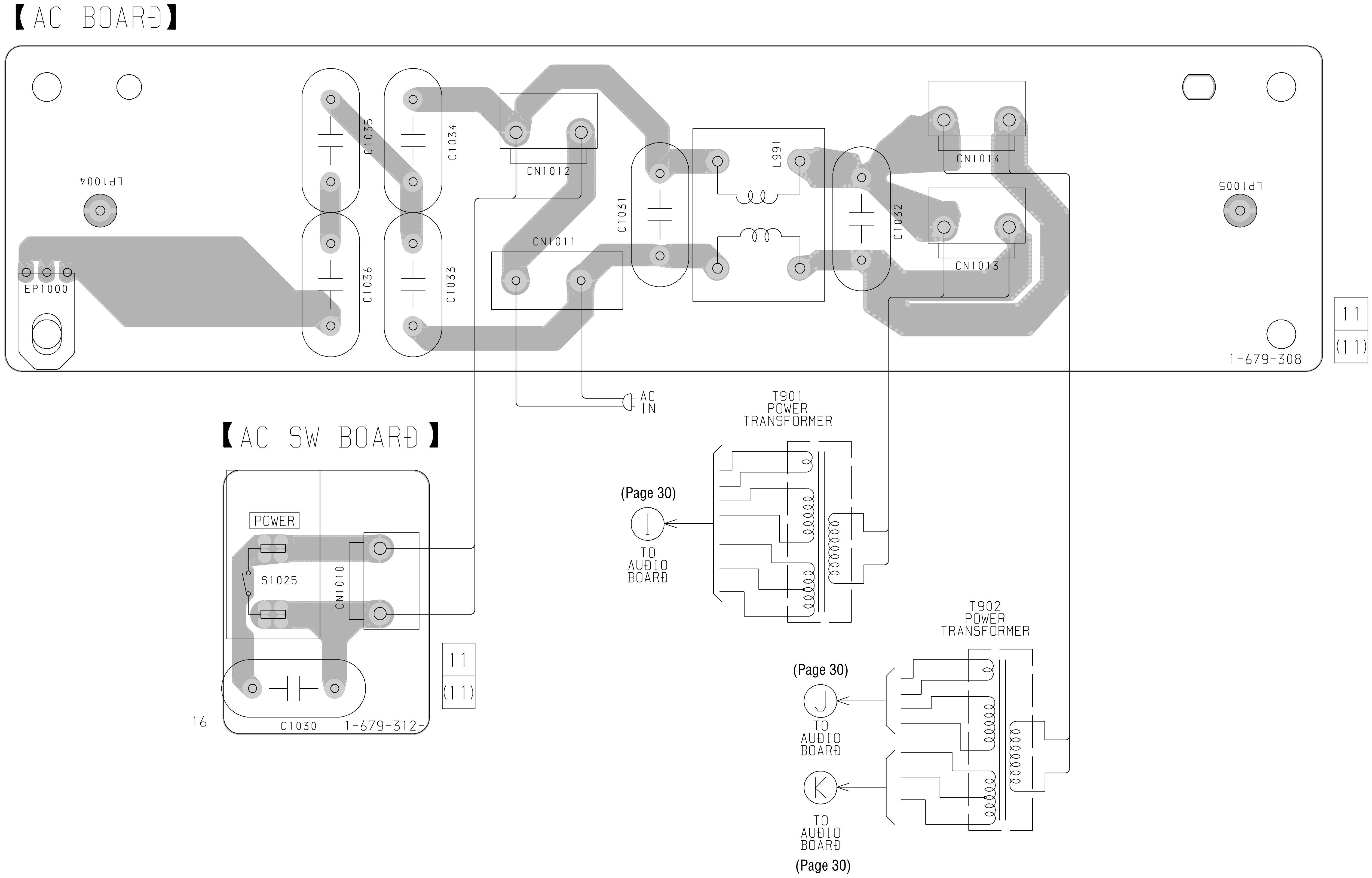

TO
MAIN BOARD
Ð
(Page 20)
【JUNCTION BOARÐ】
CN11
1
13
JW9
R23
R24
R21
R22
18
1
C11
JW10
JW11
IC11
C10
S200
ROTARY ENCOÐER
(BU, TABLE AÐÐRESS ÐETECT)
R25
CN14
3
1
R26
10
9
JW12
6
1
CN15
CN13
2
1
JW13
JW14
JW15
S11
(OPEN/CLOSE ÐETECT)
OPEN → CLOSE
1-676-246-
11
(11)
【SENSOR BOARÐ】
CN10
6
1
R12
R10
R11
Ð10
2
1
4
5
3
JW5
JW6
JW7
JW8
JW4
JW3
JW2
JW1
M11
(TRAY)
Ð11
1-676-245-
11
(11)
【LOAÐING MOTOR BOARÐ】
M10
(LOAÐING)
N017
1
2
1-676-244-
11
(11)

4-22. SCHEMATIC DIAGRAM POWER SECTION


1
2
3
4
5
6
7
8
A
B
C
D
T901
POWER
TRANSFORMER
T902
POWER
TRANSFORMER
I
TO
AUDIO BOARD
(Page 29)
J
TO
AUDIO BOARD
(Page 29)
K
TO
AUDIO BOARD
(Page 29)
6 FLP_AC1
5 FLP_AC2
4 FL_AC1
3 FL_AC2
2 DR_AC1
1 DR_AC2
1 SYS_AC1
2 SYS_AC2
3 DF_AC1
4 DF_AC2
5 AU_AC1
6 AU_GND
7 AU_AC2
【AC BOARD】
CN1013
2P
CN1014
2P
CN1011
2P
CN1012
2P
L991
LINE FILTER
C1032
10000p F
C1031
10000p F
C1033
220p
F
C1035
220p
F
C1036
220p
F
E
EP1000
16
AC
IN
【AC SW BOARD】
CN1010
2P
C1030 10000p
S1025
POWER

4-23. PRINTED WIRING BOARD POWER SECTION

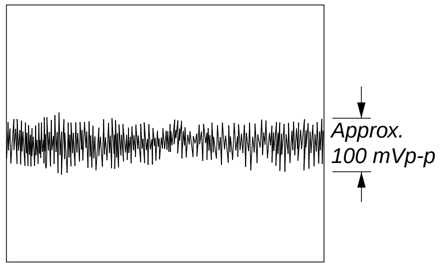
• Refer to page 12 for Circuit Board Location.


【AC BOARD】
LP1004
C1035
C1034
CN1012
C1031
L991
C1032
CN1014
LP1005
EP1000
C1036
C1033
CN1011
CN1013
11
(11)
1-679-308
AC
IN
T901
POWER
TRANSFORMER
【AC SW BOARD】
POWER
S1025
CN1010
C1030
1-679-312-
16
11
(11)
(Page 30)
I
TO
AUDIO
BOARD
T902
POWER
TRANSFORMER
(Page 30)
J
TO
AUDIO
BOARD
K
TO
AUDIO
BOARD
(Page 30)

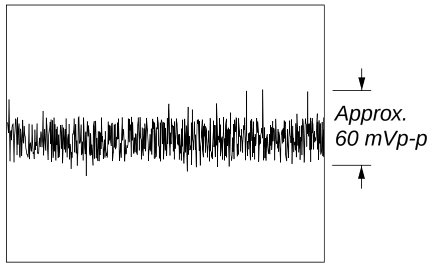
- **Waveforms**

– RF Board –

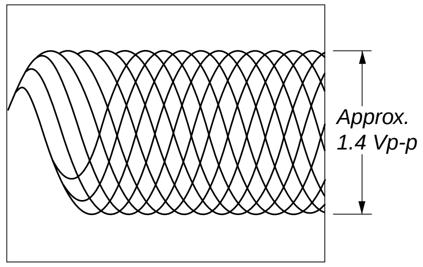
❶ IC001 ㊴ (TE) (CD PLAY)



❷ IC001 ㊵ (FE) (CD PLAY)

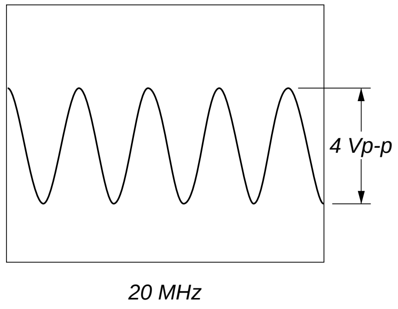


❸ IC001 (57) (RFAC) (CD PLAY)

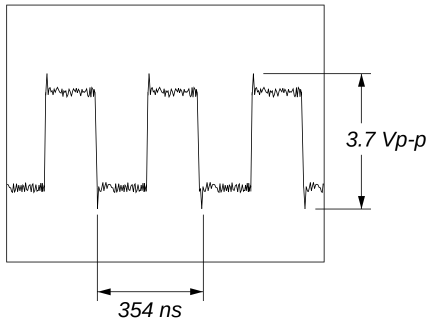


– MAIN Board –

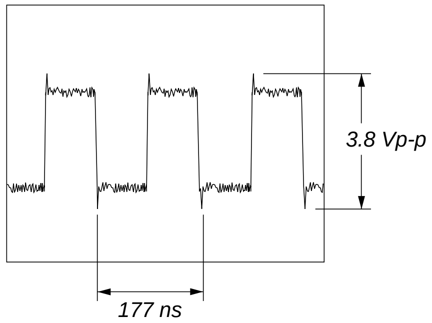
❶ IC901 ㊵ (XTAL)



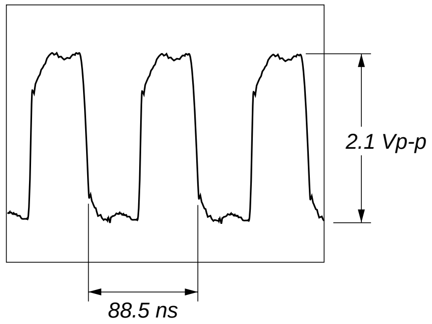
❷ IC809 ⑧ (X2Q)



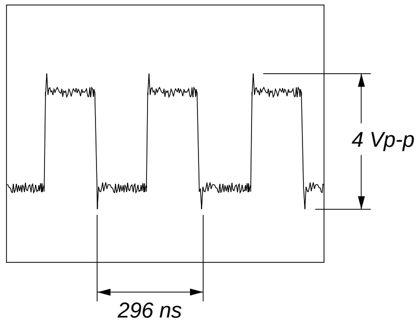
❸ IC809 ⑪ (2CK)



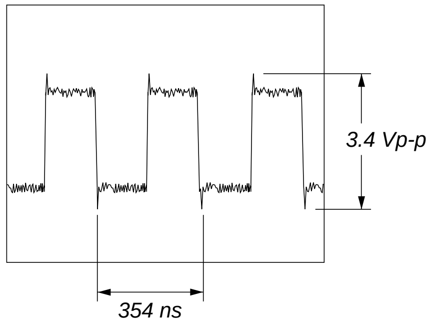
❹ IC811 ①



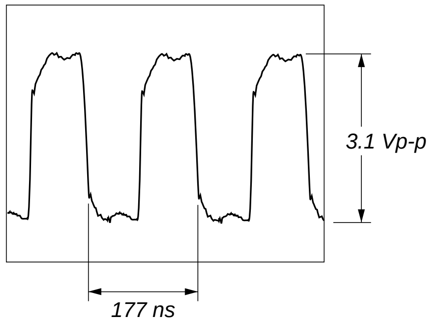
❺ IC801 ⑤ (SDCK)



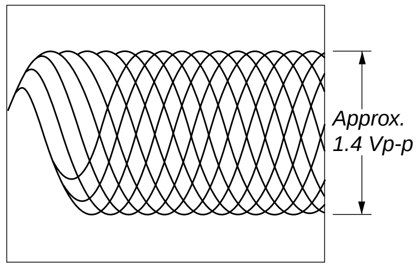
❻ IC801 ㊷ (BCKD)



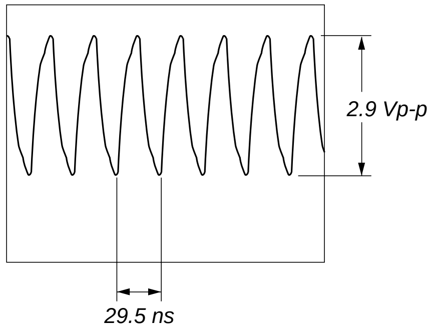
❼ IC801 ㊻ (BCKA)



❽ IC509 ㊿ (RFAC) (CD PLAY)

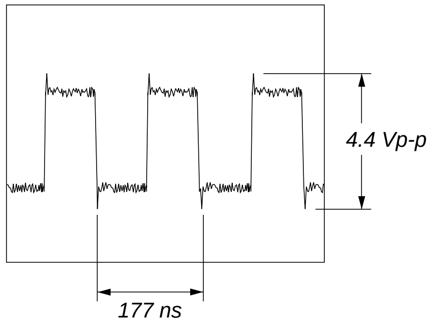


❾ IC801 ⑭ (MCKI)

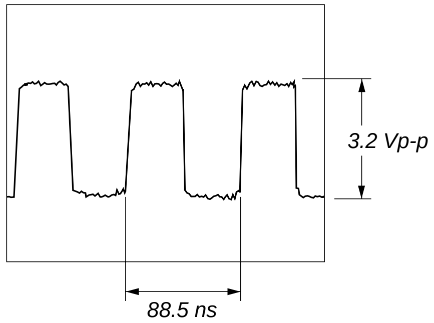


– AUDIO Board –

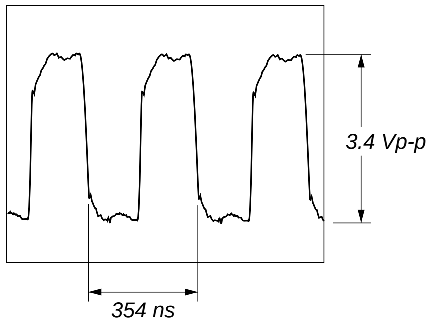
❶ IC300 ⑤ (Q)



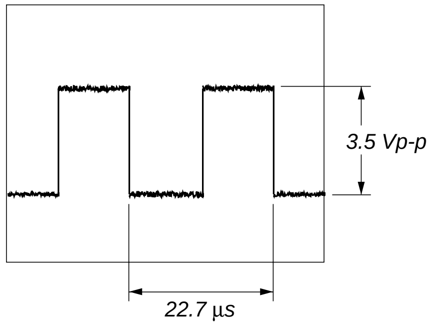
❷ IC301 ㊹ (LVCKO2),
IC300 ① (CLK)



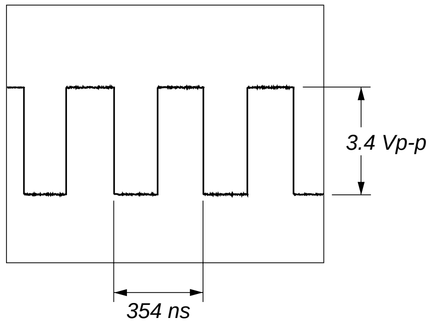
❸ IC301 ㊾ (BCKI)



❹ IC301 ㊿ (LRCKI)

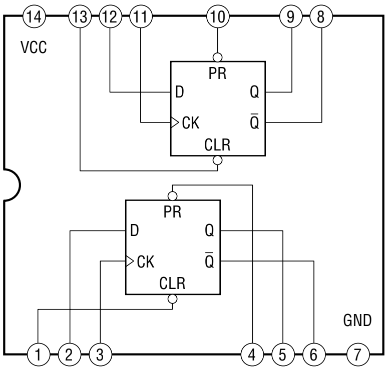


❺ IC301 (51) (SBCKI)



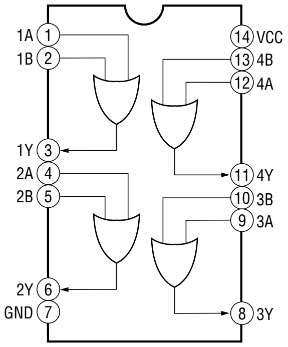
4-24. IC BLOCK DIAGRAMS

IC809 SN74LV74APWR (MAIN BOARD)



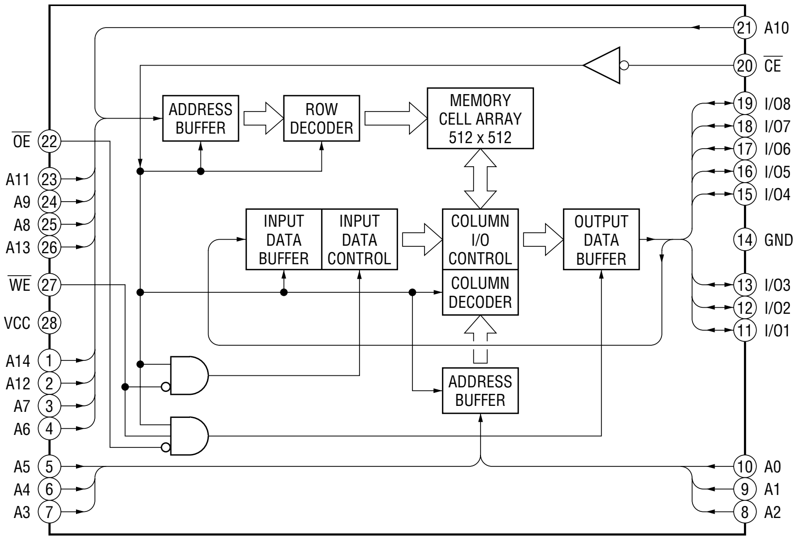
14
13
12
11
10
9
8
VCC
PR
D
Q
CK
Q̄
CLR
PR
D
Q
CK
Q̄
CLR
GND
1
2
3
4
5
6
7

IC906 TC74VHCT32AFT (MAIN BOARD)



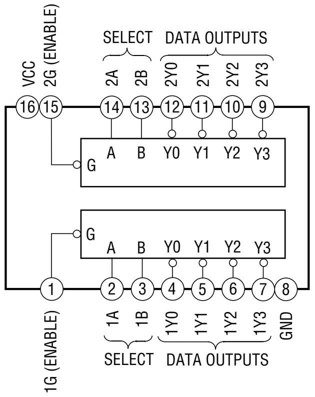
1A 1
1B 2
1Y 3
2A 4
2B 5
2Y 6
GND 7
14 VCC
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y

IC908 LC35256DM-70 (MAIN BOARD)



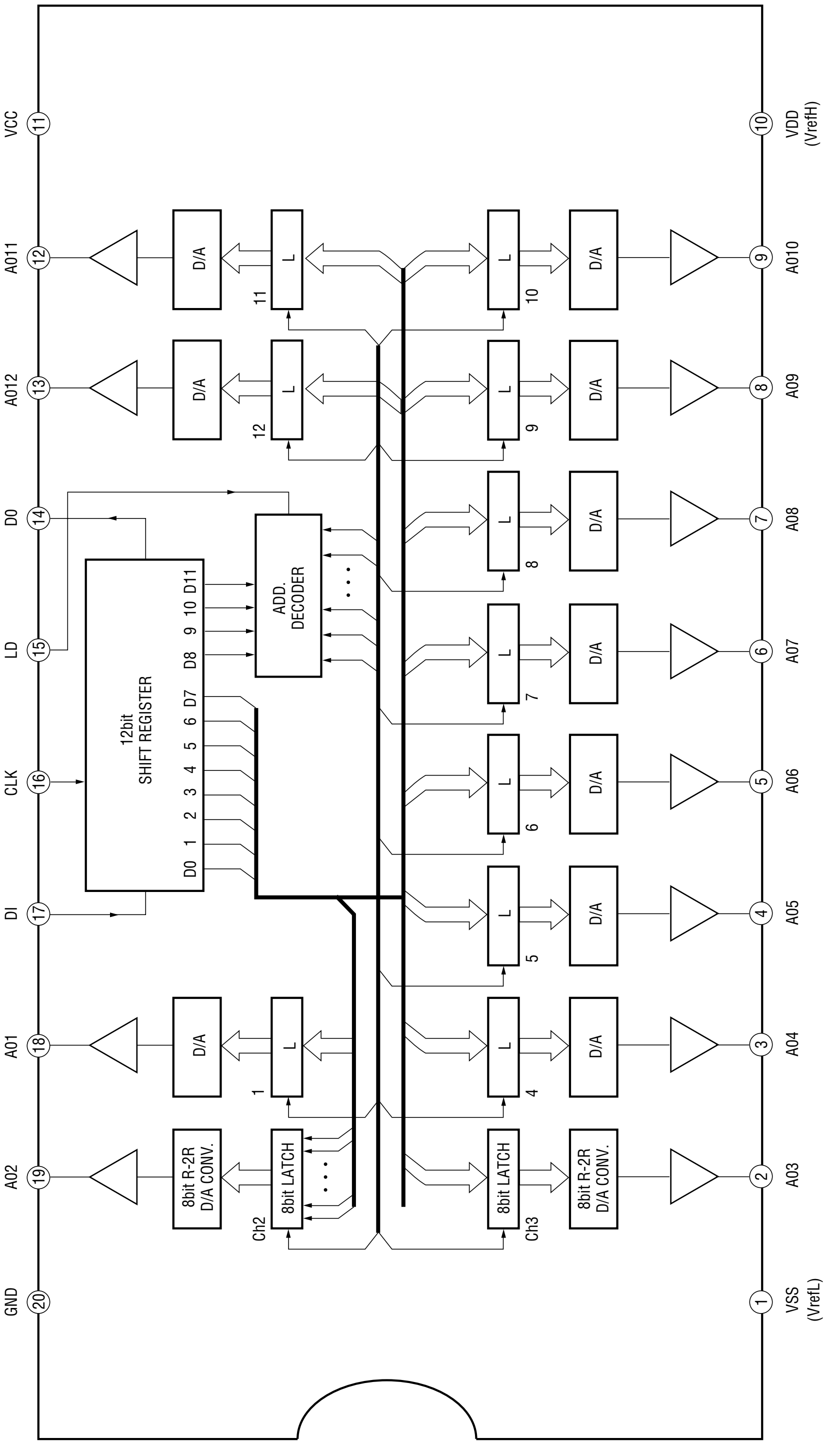
21 A10
20 CE
19 I/O8
18 I/O7
17 I/O6
16 I/O5
15 I/O4
14 GND
13 I/O3
12 I/O2
11 I/O1
10 A0
9 A1
8 A2
OE 22
A11 23
A9 24
A8 25
A13 26
WE 27
VCC 28
A14 1
A12 2
A7 3
A6 4
A5 5
A4 6
A3 7
ADDRESS BUFFER
ROW DECODER
MEMORY CELL ARRAY 512 x 512
INPUT DATA BUFFER
INPUT DATA CONTROL
COLUMN I/O CONTROL
OUTPUT DATA BUFFER
COLUMN DECODER
ADDRESS BUFFER

IC909 SN74HC139APWR (MAIN BOARD)

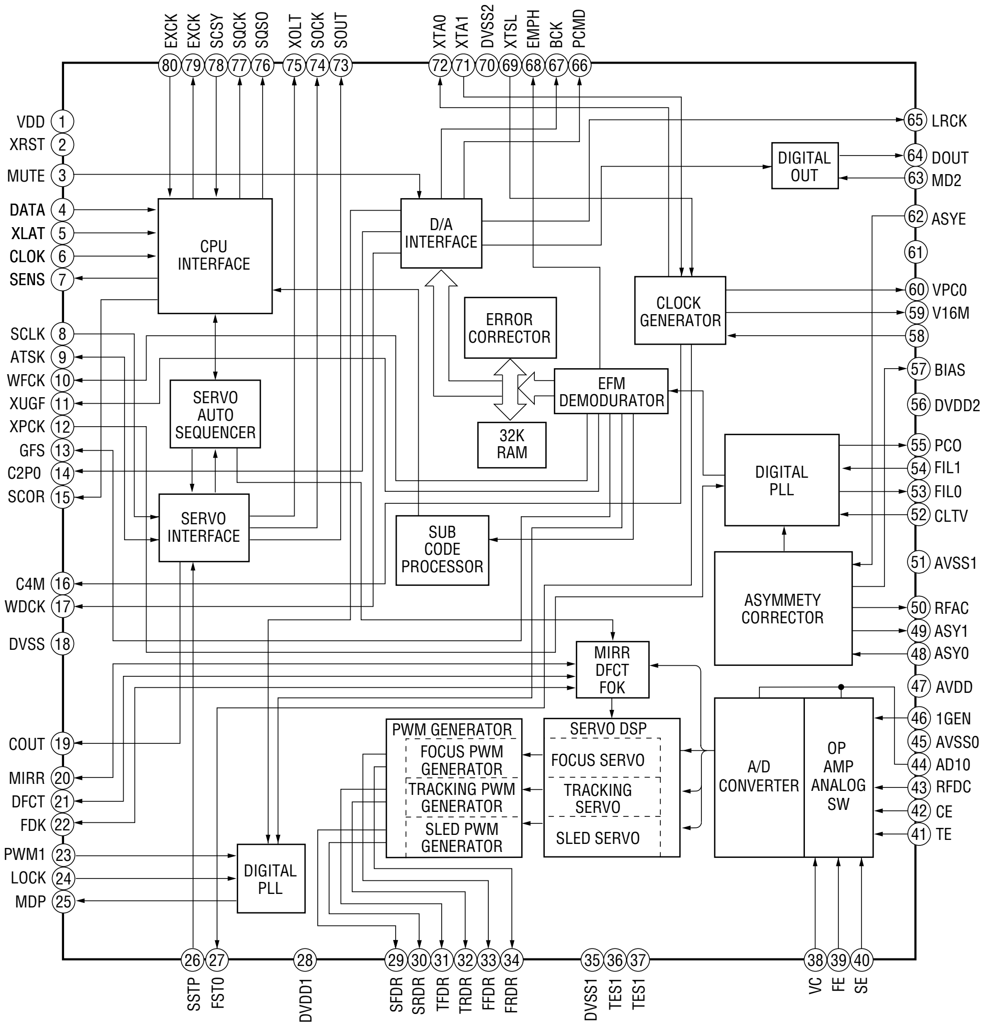


VCC
2G (ENABLE)
SELECT
DATA OUTPUTS
2A
2B
2Y0
2Y1
2Y2
2Y3
16
15
14
13
12
11
10
9
G
A
B
Y0
Y1
Y2
Y3
G
A
B
Y0
Y1
Y2
Y3
1
2
3
4
5
6
7
8
1G (ENABLE)
1A
1B
1Y0
1Y1
1Y2
1Y3
GND
SELECT
DATA OUTPUTS

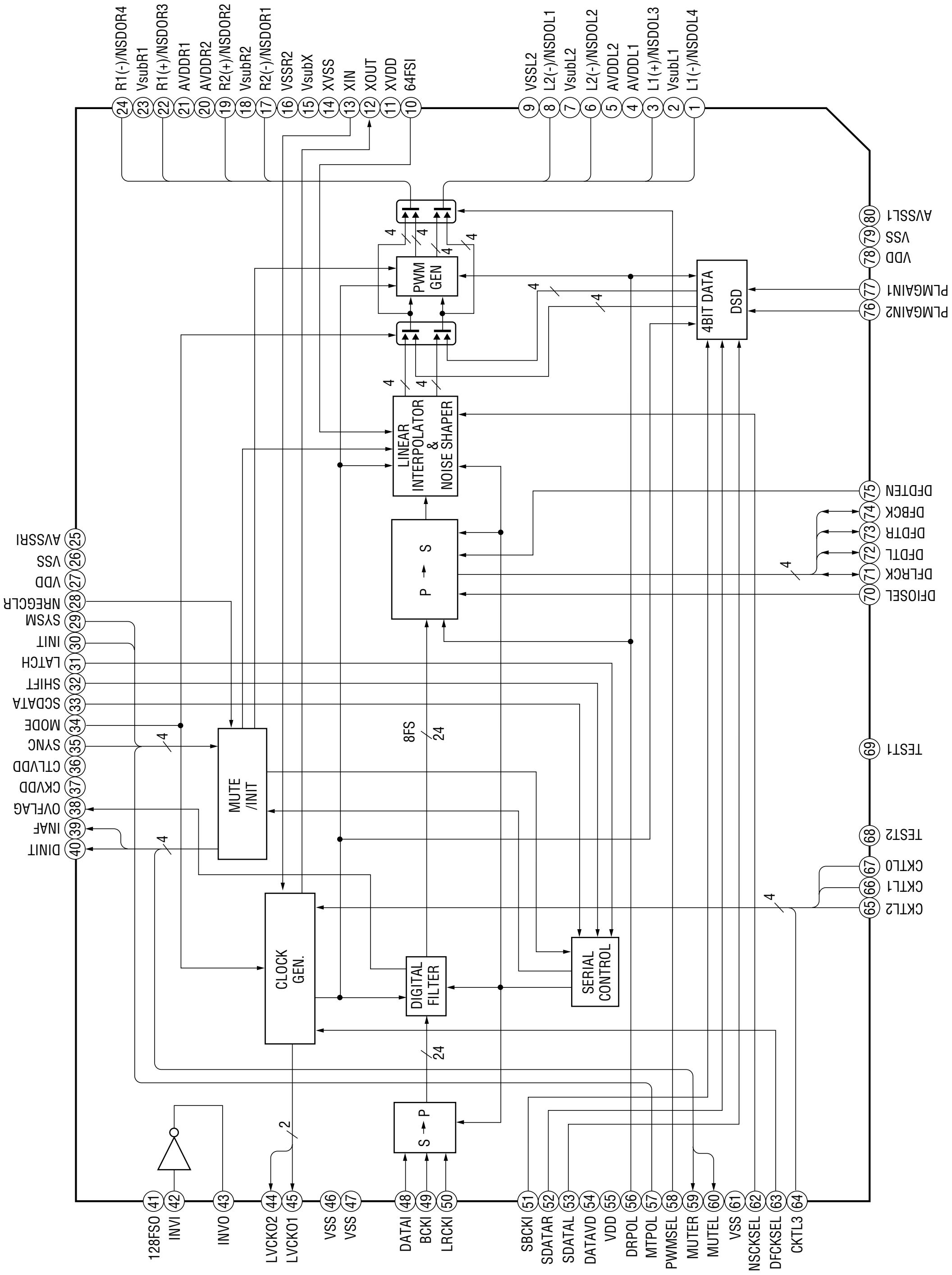
IC904 BU2500FV-E2 (MAIN BOARD)


VCC
11
A011
12
A012
13
D0
14
LD
15
CLK
16
DI
17
A01
18
A02
19
GND
20
VDD
(VrefH)
10
A010
9
A09
8
A08
7
A07
6
A06
5
A05
4
A04
3
A03
2
VSS
(VrefL)
1
D/A
L
11
10
12
9
8
7
6
5
4
1
12bit
SHIFT REGISTER
D11
10
9
D8
D7
6
5
4
3
2
1
D0
ADD.
DECODER
8bit LATCH
8bit R-2R
D/A CONV.
Ch2
Ch3

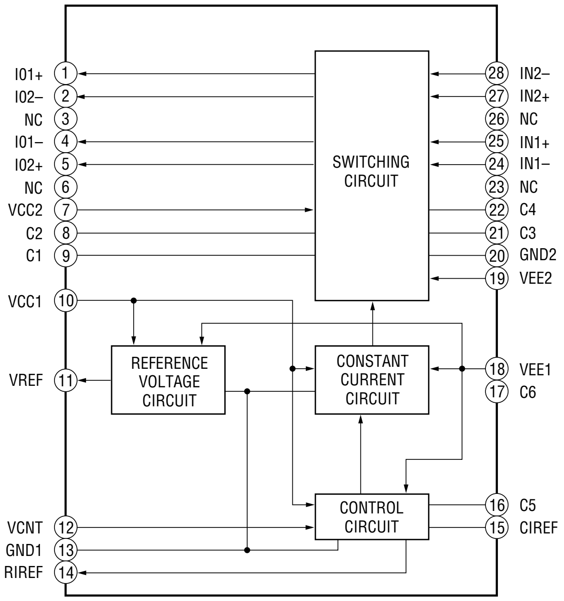
IC509 CXD3008Q (MAIN BOARD)


EXCK
EXCK
SCSY
SQCK
SQSO
XOLT
SOCK
SOUT
XTA0
XTA1
DVSS2
XTSL
EMPH
BCK
PCMD
80 79 78 77 76 75 74 73
72 71 70 69 68 67 66
VDD 1
XRST 2
MUTE 3
DATA 4
XLAT 5
CLOK 6
SENS 7
SCLK 8
ATSK 9
WFCK 10
XUGF 11
XPCK 12
GFS 13
C2P0 14
SCOR 15
C4M 16
WDCK 17
DVSS 18
COUT 19
MIRR 20
DFCT 21
FDK 22
PWM1 23
LOCK 24
MDP 25
65 LRCK
64 DOUT
63 MD2
62 ASYE
61
60 VPC0
59 V16M
58
57 BIAS
56 DVDD2
55 PCO
54 FIL1
53 FIL0
52 CLTV
51 AVSS1
50 RFAC
49 ASY1
48 ASY0
47 AVDD
46 1GEN
45 AVSS0
44 AD10
43 RFDC
42 CE
41 TE
26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
SSTP
FST0
DVDD1
SFDR
SRDR
TFDR
TRDR
FFDR
FRDR
DVSS1
TES1
TES1
VC
FE
SE
CPU INTERFACE
D/A INTERFACE
DIGITAL OUT
ERROR CORRECTOR
CLOCK GENERATOR
SERVO AUTO SEQUENCER
EFM DEMODURATOR
32K RAM
DIGITAL PLL
SERVO INTERFACE
SUB CODE PROCESSOR
ASYMMETY CORRECTOR
MIRR DFCT FOK
PWM GENERATOR
FOCUS PWM GENERATOR
TRACKING PWM GENERATOR
SLED PWM GENERATOR
SERVO DSP
FOCUS SERVO
TRACKING SERVO
SLED SERVO
A/D CONVERTER
OP AMP ANALOG SW
DIGITAL PLL

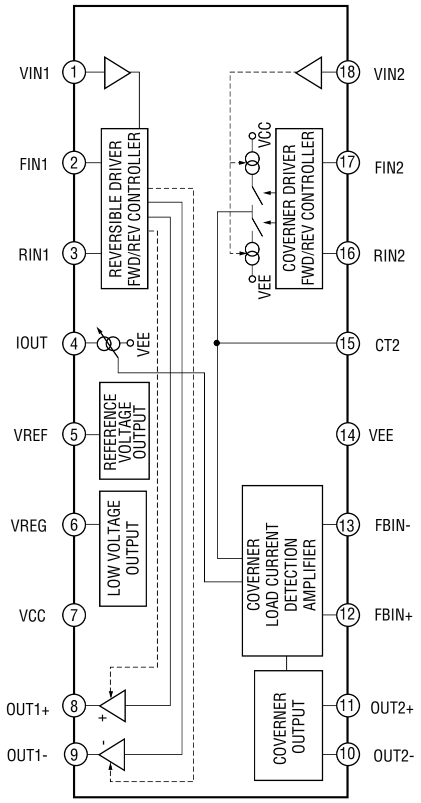
IC301 CXD9556AQ (AUDIO BOARD)


24 R1(-)/NSDOR4
23 VsubR1
22 R1(+)/NSDOR3
21 AVDDR1
20 AVDDR2
19 R2(+)/NSDOR2
18 VsubR2
17 R2(-)/NSDOR1
16 VSSR2
15 VsubX
14 XVSS
13 XIN
12 XOUT
11 XVDD
10 64FSI
9 VSSL2
8 L2(-)/NSDOL1
7 VsubL2
6 L2(-)/NSDOL2
5 AVDDL2
4 AVDDL1
3 L1(+)/NSDOL3
2 VsubL1
1 L1(-)/NSDOL4
25 AVSSRI
26 VSS
27 VDD
28 NREGCLR
29 SYSM
30 INIT
31 LATCH
32 SHIFT
33 SCDATA
34 MODE
35 SYNC
36 CTLVDD
37 CKVDD
38 OVFLAG
39 INAF
40 DINIT
41 128FSO
42 INVI
43 INVO
44 LVCKO2
45 LVCKO1
46 VSS
47 VSS
48 DATAI
49 BCKI
50 LRCKI
51 SBCKI
52 SDATAR
53 SDATAL
54 DATAVD
55 VDD
56 DRPOL
57 MTPOL
58 PWMSEL
59 MUTER
60 MUTEL
61 VSS
62 NSCKSEL
63 DFCKSEL
64 CKTL3
65 CKTL2
66 CKTL1
67 CKTL0
68 TEST2
69 TEST1
70 DFIOSEL
71 DFLRCK
72 DFDTL
73 DFDTR
74 DFBCK
75 DFDTEN
76 PLMGAIN2
77 PLMGAIN1
78 VDD
79 VSS
80 AVSSL1
PWM GEN
4BIT DATA DSD
LINEAR INTERPOLATOR & NOISE SHAPER
P → S
MUTE /INIT
CLOCK GEN.
DIGITAL FILTER
SERIAL CONTROL
S → P
8FS
24
4
2

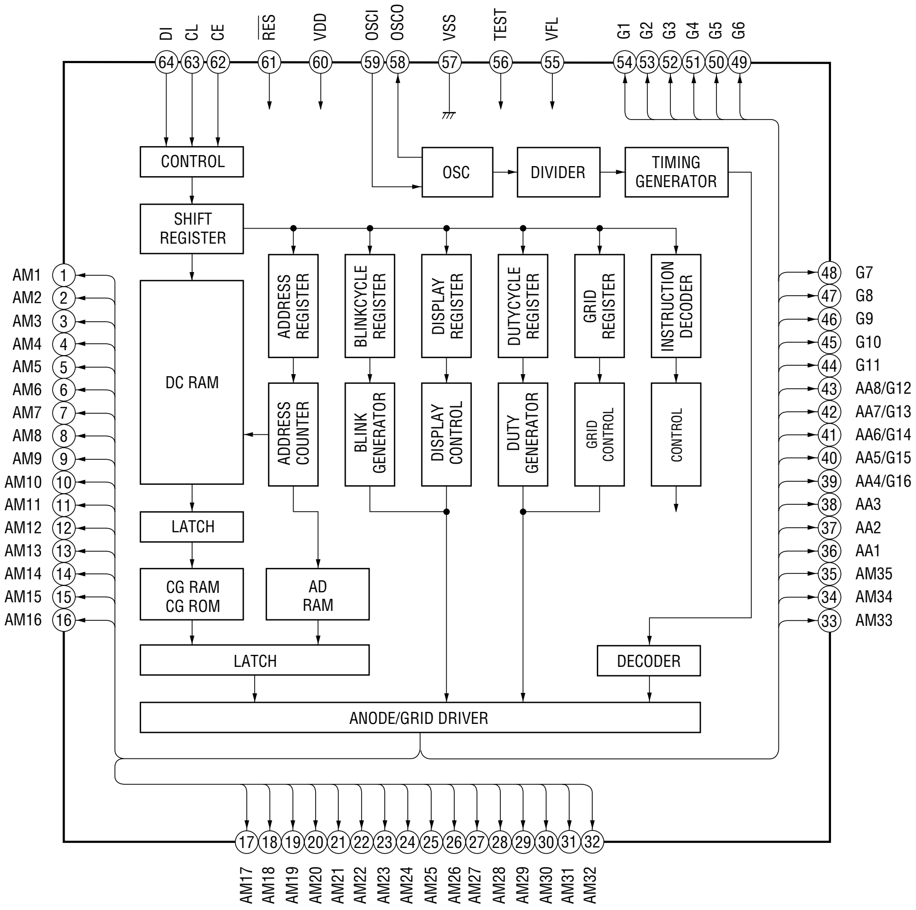
IC100, IC200 CXA8042AS (AUDIO BOARD)


IO1+ 1
IO2– 2
NC 3
IO1– 4
IO2+ 5
NC 6
VCC2 7
C2 8
C1 9
VCC1 10
VREF 11
VCNT 12
GND1 13
RIREF 14
SWITCHING CIRCUIT
REFERENCE VOLTAGE CIRCUIT
CONSTANT CURRENT CIRCUIT
CONTROL CIRCUIT
28 IN2–
27 IN2+
26 NC
25 IN1+
24 IN1–
23 NC
22 C4
21 C3
20 GND2
19 VEE2
18 VEE1
17 C6
16 C5
15 CIREF

IC11 BA6780 (JUNCTION BOARD)


VIN1 1
FIN1 2
RIN1 3
IOUT 4
VREF 5
VREG 6
VCC 7
OUT1+ 8
OUT1- 9
REVERSIBLE DRIVER FWD/REV CONTROLLER
VEE
REFERENCE VOLTAGE OUTPUT
LOW VOLTAGE OUTPUT
+
-
VCC
VEE
COVERNER DRIVER FWD/REV CONTROLLER
COVERNER LOAD CURRENT DETECTION AMPLIFIER
COVERNER OUTPUT
18 VIN2
17 FIN2
16 RIN2
15 CT2
14 VEE
13 FBIN-
12 FBIN+
11 OUT2+
10 OUT2-

IC1001 LC75721E (DISPLAY BOARD)


DI 64
CL 63
CE 62
RES 61
VDD 60
OSCI 59
OSCO 58
VSS 57
TEST 56
VFL 55
G1 54
G2 53
G3 52
G4 51
G5 50
G6 49
CONTROL
SHIFT REGISTER
OSC
DIVIDER
TIMING GENERATOR
DC RAM
ADDRESS REGISTER
BLINKCYCLE REGISTER
DISPLAY REGISTER
DUTYCYCLE REGISTER
GRID REGISTER
INSTRUCTION DECODER
ADDRESS COUNTER
BLINK GENERATOR
DISPLAY CONTROL
DUTY GENERATOR
GRID CONTROL
CONTROL
LATCH
CG RAM CG ROM
AD RAM
LATCH
DECODER
ANODE/GRID DRIVER
AM1 1
AM2 2
AM3 3
AM4 4
AM5 5
AM6 6
AM7 7
AM8 8
AM9 9
AM10 10
AM11 11
AM12 12
AM13 13
AM14 14
AM15 15
AM16 16
48 G7
47 G8
46 G9
45 G10
44 G11
43 AA8/G12
42 AA7/G13
41 AA6/G14
40 AA5/G15
39 AA4/G16
38 AA3
37 AA2
36 AA1
35 AM35
34 AM34
33 AM33
17 AM17
18 AM18
19 AM19
20 AM20
21 AM21
22 AM22
23 AM23
24 AM24
25 AM25
26 AM26
27 AM27
28 AM28
29 AM29
30 AM30
31 AM31
32 AM32

4-25. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC801 CXD2751Q (DSP DECODER)

Pin No.	Pin Name	I/O	Description
1	XSRQ	O	Data request signal output to the DVD CONVERTER (IC701)
2	XSHD	I	Header flag signal input from the DVD CONVERTER (IC701)
3	VDD	—	Power supply terminal (+3.3V)
4	VSS	—	Ground terminal
5	SDCK	I	Serial data clock signal input from the DVD CONVERTER (IC701)
6	SMUTE	I	Muting signal input from the system controller (IC901) “L”: muting
7	XMSLAT	I	Latch signal input from the system controller (IC901)
8	MSCK	I	Clock signal input from the system controller (IC901)
9	MSDATI	I	Serial data input from the system controller (IC901)
10	MSDATO	O	Serial data output to the system controller (IC901)
11	MSREDY	I	Ready signal input from the system controller (IC901) “L”: ready
12	XMSDOE	O	Data enable signal output terminal Not used (open)
13	XRST	I	Reset signal input from the expander (IC902)
14	MCKI	I	Master clock signal input terminal
15	VSS	—	Ground terminal
16	CK75S	I	Master clock select signal input terminal “L”: 512fs, “H”: 768fs (fixed at “H” in this set)
17	EXCKO1	O	External clock 1 signal output terminal
18	EXCKO2	O	External clock 2 signal output terminal Not used (open)
19	LRCK	I/O	Clock signal input/output terminal (44.1kHz) Not used (open)
20	NC	—	Not used (open)
21	MNT2	O	Monitor 2 signal output terminal Not used (open)
22	TRST	I	Reset signal input terminal (normally: fixed at “L”)
23	TCK	I	Clock signal input terminal for test (normally: fixed at “L”)
24	TDI	I	Data input terminal for test (normally: open)
25	TENA1	I	Data enable signal input terminal for test (normally: open)
26	TDO	O	Data output terminal for test (normally: open)
27	VST	—	Ground terminal for test (normally: fixed at “L”)
28	VDD	—	Power supply terminal (+3.3V)
29	VSS	—	Ground terminal
30	MNT1	O	Monitor 1 signal output terminal Not used (open)
31	MNT0	O	Monitor 0 signal output terminal Not used (open)
32	XBIT	O	Monitor signal output terminal Not used (open)
33	F75HZ	O	Clock output terminal (75Hz) Not used (open)
34	SUPDAT	O	Serial data output terminal Not used (open)
35	XSUPAK	O	Data flag signal output terminal Not used (open)
36	SUPEN	O	Data enable signal output terminal Not used (open)
37	TEST1	I	Test 1 signal input terminal for test (normally: fixed at “L”)
38	VSS	—	Ground terminal
39	TEST2	I	Test 2 signal input terminal for test (normally: fixed at “L”)
40, 41	VSS	—	Ground terminal
42	BCKD	I	Phase reference signal input terminal
43 to 45	NC	—	Not used (open)
46	BCKA	I	Shift clock signal input terminal
47	DSAL	O	DSD data (Lch) output terminal
48	DSAR	O	DSD data (Rch) output terminal
49	ZDFLGL	O	Data (Lch) flag detect signal output terminal Not used (open)

Pin No.	Pin Name	I/O	Description
50	ZDFLGR	O	Data (Rch) flag detect signal output terminal Not used (Open)
51, 52	A0, A1	O	Address signal output to the D-RAM (IC808)
53	VDD	—	Power supply terminal (+3.3V)
54	VSS	—	Ground terminal
55 to 63	A2 to A10	O	Address signal output to the D-RAM (IC808)
64	NC	—	Not used (open)
65	VSS	—	Ground terminal
66	XWE	O	Write enable signal output to the D-RAM (IC808)
67	XCAS	O	Column address strobe signal output to the D-RAM (IC808)
68	XRAS	O	Row address strobe signal output to the D-RAM (IC808)
69	XOE	O	Read enable signal output to the D-RAM (IC808)
70 to77	DQ0 to DR7	I/O	Two-way data bus with the D-RAM (IC808)
78	VDD	—	Power supply terminal (+3.3V)
79	VSS	—	Ground terminal
80	WCK	I	Clock signal input terminal for disk mark detect
81	WRFD	I	RF data signal input terminal for disk mark detect
82 to 89	WAD0 to WAD7	I	A/D data signal input from the A/D converter (IC804) for disk mark detect
90	VSS	—	Ground terminal
91 to 98	SD7 to SD0	I	Stream data signal input from the DVD CONVERTER (IC701)
99	SDEF	I	Error flag signal input from the DVD CONVERTER (IC701)
100	XSAK	I	Data flag signal input from the DVD CONVERTER (IC701)

• MAIN BOARD IC902 CXD1095BR (I/O EXPANDER)

Pin No.	Pin Name	I/O	Description
1	LIM_SW	I	Limit switch for sled servo. Not used (open)
2	(WISE)	I	Rotating direction. Not used (open)
3	F_COMPL	I	Focus Jump L signal
4	SPCNTL1	O	Speed control-1. Not used (open)
5	SPCNTL0	O	Speed control-0. Not used (open)
6	TBLL	O	TABLE MOTOR - L DIRECTION
7	TBLR	O	TABLE MOTOR - R DIRECTION
8	Vss	—	Ground terminal
9	REMCODE	I	Not used (open)
10	D_SENS	I	DISC SENSOR
11	S1	I	Tray position detection sensor-1
12	S2	I	Tray position detection sensor-2
13	LOAD_OUT	O	Load signal output
14	SDCNTL	O	Sled Control
15	LOAD_IN	I	Load signal input
16	A1OUT	O	Control A1 (Output)
17	NC	—	Not used (open)
18	RST_DSD	O	Reset Signal for DSD
19	RST_DP	O	Reset Signal for DISPLAY uCOM
20	RST_DVD	O	Reset Signal for DVD DSP
21	RST_CD	O	Reset Signal for CD DSP
22	VMOD	O	
23	Vss	—	Ground terminal
24	Vdd	—	Power supply terminal
25	PD5	O	MULTI/2CH SW for AUDIO board (1: MULTI)
26	PD6	O	RF amplifier serial enable signal (SEN_RF)
27	PD7	O	To be used for disc inspection mode.
28 – 30	D0-2	I/O	Data bus
31,32	NC	—	Data bus. Not used (open)
33 – 37	D3-7	I/O	Data bus
38	XCLR	I	Clear signal input terminal (Pull up)
39	XDIS	I	Reset signal input from the ARP
40	Vss	—	Ground terminal
41	XWR	I	Strobe signal input from the CPU
42	XRD	I	Strobe signal input from the CPU
43	XCS	I	Chip enable signal input from the CPU
44 – 46	A0-2	I/O	Address bus
47	PE0	—	Not used (open)
48	PE1	—	Not used (open)
49	NC	—	Not used (open)
50	TRKFIL	O	Tracking Filter
51	—	I/O	Not used (open)
52	DFCTEN	O	Energy saving mode
53	—	O	Not used (open)
54	MRSEL1	O	CD/SACD CHANGE
55	Vss	—	Ground terminal
56	Vdd	—	Power supply terminal
57	AGING_ERR	O	DEBUG FLAG. Not used (open)
58	PA4	I	Not used (open)
59	OUT_SW	I	TRAY OUT SENSOR
60	PA6	I	Not used (open)
61	PA7	I	Not used (open)
62	F_COMPH	I	Focus Jump H Signal
63	NC	—	Not used (open)
64	NC	—	Not used (open)

• **MAIN BOARD IC701 CXD1882R** (SACD DECODER)

Pin No.	Pin Name	I/O	Description
1, 2	D5, D6	I/O	Two-way data bus with the CPU (IC901) and expander (IC902)
3	VSS	—	Ground terminal (digital system)
4	D7	I/O	Two-way data bus with the CPU (IC901) and expander (IC902)
5	A0	I	Address signal input from the CPU (IC901)
6	VDD	—	Power supply terminal (+3.3V) (digital system)
7	A1	I	Address signal input from the CPU (IC901)
8	VDD5V	—	Power supply terminal (+5V)
9 to 14	A2 to A7	I	Address signal input from the CPU (IC901)
15	VSS	—	Ground terminal (digital system)
16	XWAIT	O	Wait signal output terminal Not used (open)
17	XRD	I	Read strobe signal input from the CPU (IC901)
18	XWR	I	Write strobe signal input from the CPU (IC901)
19	XCS	I	Chip select signal input from the CPU (IC901)
20, 21	XINT0, XINT1	O	Interrupt signal output to the CPU (IC901)
22	VDD	—	Power supply terminal (+3.3V) (digital system)
23	XHRS	I	Not used (open)
24	HDB7	O	Stream data signal output to the DSD decoder (IC801)
25	VSS	—	Ground terminal (digital system)
26	HDB8	O	Error flag signal output to the DSD decoder (IC801)
27	HDB6	O	Stream data signal output to the DSD decoder (IC801)
28	VDDS	—	Power supply terminal (+5V) (digital system)
29	HDB9	O	Not used (open)
30	HDB5	O	Stream data signal output to the DSD decoder (IC801)
31	HDBA	O	Not used (open)
32	HDB4	O	Stream data signal output to the DSD decoder (IC801)
33	VSS	—	Ground terminal (digital system)
34	HDBB	O	Not used (open)
35	HDB3	O	Stream data signal output to the DSD decoder (IC801)
36	VDD	—	Power supply terminal (+3.3V) (digital system)
37	HDBC	O	Not used (open)
38	VDDS	—	Power supply terminal (+5V) (digital system)
39	HDB2	O	Stream data signal output to the DSD decoder (IC801)
40	HDBD	O	Not used (open)
41	HDB1	O	Stream data signal output to the DSD decoder (IC801)
42	VSS	—	Ground terminal (digital system)
43	HDBE	O	Not used (open)
44	HDB0	O	Stream data signal output to the DSD decoder (IC801)
45	HDBF	O	Not used (open)
46	XACK	O	Serial data transfer acknowledge signal output to the DSD decoder (IC801)
47	VDDS	—	Power supply terminal (+5V) (digital system)
48	DCK	O	Serial data transfer clock signal output to the DSD decoder (IC801)
49	XSHDR0	O	Header flag signal output to the DSD decoder (IC801)
50	VDD	—	Power supply terminal (+3.3V) (digital system)
51	REDY	O	Not used (pull up)
52	VSS	—	Ground terminal (digital system)
53	REQUEST	I	Serial data transfer request signal input from the DSD decoder (IC801)
54	HINT	O	Not used (pull up)
55	XS16	O	Not used (pull up)
56	HA1	I	Not used (fixed at “H”)
57	XPDI	I/O	Not used (pull up)
58	VDDS	—	Power supply terminal (+5V) (digital system)
59, 60	HA0, HA2	I	Not used (fixed at “H”)

Pin No.	Pin Name	I/O	Description
61	VSS	—	Ground terminal (digital system)
62, 63	HCS0, HCS1	I	Not used (open)
64	VDD	—	Power supply terminal (+3.3V) (digital system)
65	DASP	I/O	Not used (pull up)
66 to 69	MDB0 to MDB3	I/O	Two-way data bus with the D-RAM (IC706)
70	VSS	—	Ground terminal (digital system)
71	MDB4	I/O	Two-way data bus with the D-RAM (IC706)
72	VDD5V	—	Power supply terminal (+5V)
73 to 75	MDB5 to MDB7	I/O	Two-way data bus with the D-RAM (IC706)
76	XMWR	O	Write enable signal output to the D-RAM (IC706)
77	VDD	—	Power supply terminal (+3.3V) (digital system)
78	XRAS	O	Row address strobe signal output to the D-RAM (IC706)
79, 80	MA0, MA1	O	Address signal output to the D-RAM (IC706)
81	VSS	—	Ground terminal (digital system)
82 to 87	MA2 to MA7	O	Address signal output to the D-RAM (IC706)
88	VDD	—	Power supply terminal (+3.3V) (digital system)
89	MA8	O	Address signal output to the D-RAM (IC706)
90	VSS	—	Ground terminal (digital system)
91	MA9/MNT0	O	Address signal output to the D-RAM (IC706)
92	MA10/MNT1	O	RF data signal output terminal for disc mark detection
93	MA11/MNT2	O	Clock signal output terminal for disc mark detection Monitor signal output to the CPU (IC901)
94	XMOE	O	Output enable signal output to the D-RAM (IC706)
95	XCAS	O	Column address strobe signal output to the D-RAM (IC706)
96, 97	MDB8, MDB9	I/O	Two-way data bus with the D-RAM (IC706)
98	VSS	—	Ground terminal (digital system)
99	MDBA	I/O	Two-way data bus with the D-RAM (IC706)
100	VDD	—	Power supply terminal (+3.3V) (digital system)
101, 102	MDBB, MDBC	I/O	Two-way data bus with the D-RAM (IC706)
103	VDD5V	—	Power supply terminal (+5V)
104 to 106	MDBD to MDBF	I/O	Two-way data bus with the D-RAM (IC706)
107	GFS	O	Guard frame sync signal output to the CPU (IC901)
108	VSS	—	Ground terminal (digital system)
109	APEO	O	Absolute phase error signal output
110	VDD	—	Power supply terminal (+3.3V) (digital system)
111	DASYO	O	RF binary signal output
112	GNDA5	—	Ground terminal (analog system)
113, 114	ASF1, AFS2	—	Filter connected terminal for selection the constant asymmetry compensation
115	DASYI	I	Analog signal input after integrated from the RF binary signal
116	RFDCC	I	Input terminal for adjusting DC cut high-pass filter for RF signal
117	RF IN	I	RF signal input from the CXD1881R (IC001)
118, 119	VCCA5, VCCA4	—	Power supply terminal (+3.3V) (analog system)
120	VCOR1	—	VCO oscillating range setting resistor connected terminal
121	VCOIN	I	VCO input terminal
122, 123	GNDA4, GNDA3	—	Ground terminal (analog system)
124	LPF5	O	Signal output from the operation amplifier from PLL loop filter
125	VC1	I	Middle point voltage (+1.65V) input terminal
126, 127	LPF2, LPF1	I	Inverted signal input to the operation amplifier from PLL loop filter
128, 129	VCCA3, VCCA2	—	Power supply terminal (+3.3V) (analog system)
130	PDO	O	Signal output from the charge pump for phase comparator
131	PDHVCC	I	Middle point voltage input terminal for RF PLL

Pin No.	Pin Name	I/O	Description
132	FDO	O	Signal output from the charge pump for frequency comparator
133, 134	GNDA2, GNDA1	—	Ground terminal (analog system)
135	SPO	O	Spindle motor (M3) control signal output to the BA5912AFP (IC512)
136	VC2	I	Middle point voltage (+1.65V) input terminal
137	MDIN2	I	Spindle motor (M3) control signal input from the CXD3008Q (IC509)
138	MDIN1	I	MDP input terminal
139	VCCA1	—	Power supply terminal (+3.3V) (analog system)
140	CLVS	O	Control signal output for selection the spindle control filter at CLVS
141	VSS	—	Ground terminal (digital system)
142	MDSOUT	O	Frequency error output terminal of internal CLV circuit
143	VDD	—	Power supply terminal (+3.3V) (digital system)
144	MDPOUT	O	Phase error output terminal of internal CLV circuit
145	DEFECT	I	Defect signal input terminal Not used (fixed at “L”)
146	GSCOR	I	Guard subcode sync OR signal input from the CXD3008Q (IC509)
147	EXCK	O	Subcode serial data reading clock signal output to the CXD3008Q (IC509)
148	SBIN	I	Subcode serial data input from the CXD3008Q (IC509)
149	VSS	—	Ground terminal (digital system)
150	SCOR	I	Subcode sync OR signal input from the CXD3008Q (IC509)
151	WFCK	I	Write frame clock signal input from the CXD3008Q (IC509)
152	VDD5V	—	Power supply terminal (+5V)
153	XRCI	I	RAM overflow signal input terminal Not used (fixed at “L”)
154	VDDS	—	Power supply terminal (+5V) (digital system)
155	C2PO	I	C2 pointer signal input from the CXD3008Q (IC509)
156	VDD	—	Power supply terminal (+3.3V) (digital system)
157	DBCK	O	Bit clock signal (2.8224 MHz) output terminal Not used (open)
158	BCLK	I	Bit clock signal (2.8224 MHz) input from the CXD3008Q (IC509)
159	DDAT	O	PCM data output terminal Not used (open)
160	MDAT	I	Serial data input from the CXD3008Q (IC509)
161	VSS	—	Ground terminal (digital system)
162	DLRC	O	L/R sampling clock signal (44.1 kHz) output terminal Not used (open)
163	LRCK	I	L/R sampling clock signal (44.1 kHz) input from the CXD3008Q (IC509)
164	XRST	I	Reset signal input from the expander (IC902) “L”: reset
165	IFS0	I	Interface select signal input terminal Fixed at “L” in this set
166	IFS1	I	Interface select signal input terminal Fixed at “H” in this set
167	XTAL	I	33.86688 MHz clock signal input terminal
168	VSS	—	Ground terminal (digital system)
169	XTA2	O	System clock output terminal (33.86688 MHz)
170	XTA1	I	System clock input terminal (33.86688 MHz)
171	VDD	—	Power supply terminal (+3.3V) (digital system)
172 to 176	D0 to D4	I/O	Two-way data bus with the CPU (IC901) and expander (IC902)

SECTION 5
SERVICING NOTES (2)

Cleaning of Optical Pick-up Lens

In cleaning the lens of optical pick-up, use the air blower.
Never use a cotton swab for cleaning the lens of optical pick-up, which otherwise causes a trouble.

Resetting Operation at Power ON

If the power is turned on with a disc loaded in the set, a sequence of operation as shown below will be performed.
(The operation varies depending on the type of disc)   Condition: continue mode

(1) CD

1. Sled reverse move (sled in)
2. Disc detect
3. IC setting for CD
4. Servo error signal offset auto adjustment
5. Spindle kick for LD on
6. LD on
7. Focus search
8. Focus servo on
9. Spindle kick
10. Spindle servo on
11. E-F balance auto adjustment
12. Tracking & sled servo on
13. Focus bias auto adjustment
14. Focus servo gain auto adjustment
15. Tracking servo gain auto adjustment
16. Jump to lead-in area
17. Read TOC
18. Auto play (track No.1)

(2) SACD (single layer)

1. Sled reverse move (sled in)
2. Disc detect
3. IC setting for SACD
4. Servo error signal offset auto adjustment
5. Spindle kick for LD on
6. LD on
7. Focus search
8. Focus servo on
9. Spindle kick
10. Spindle servo on
11. E-F balance auto adjustment
12. Tracking & sled servo on
13. Focus bias auto adjustment
14. Focus servo gain auto adjustment
15. Tracking servo gain auto adjustment
16. Jump to lead-in area
17. Read TOC
18. Auto play (track No.1)

(3) SACD (dual layer)

1. Sled reverse move (sled in)
2. Disc detect
3. IC setting for SACD
4. Servo error signal offset auto adjustment
5. Spindle kick for LD on
6. LD on
7. Focus search
8. Focus servo on (layer 0)
9. Spindle kick
10. Spindle servo on
11. E-F balance auto adjustment (layer 0)
12. Tracking & sled servo on (layer 0)
13. Focus bias auto adjustment (layer 0)
14. Focus servo gain auto adjustment (layer 0)
15. Tracking servo gain auto adjustment (layer 0)
16. Jump to lead-in area
17. Read TOC
18. Focus jump (layer 0→layer 1)
19. E-F balance auto adjustment (layer 1)
20. Tracking & sled servo on (layer 1)
21. Focus bias auto adjustment (layer 1)
22. Focus servo gain auto adjustment (layer 1)
23. Tracking servo gain auto adjustment (layer 1)
24. Focus Jump (layer 1→layer 0)
25. Auto play (track No.1)

SECTION 6
TEST MODE

FLUORESCENT INDICATOR TUBE MODE

Note: Set the CD1/CD2 switch on the remote commander to CD1.

Procedure:

1. While shorting the Test Land and the GND side of C1002 with tweezers, press the ⏻ button and turn on the main power. The following operations will be executed automatically.

   ① Grid of all segments lights up sequentially starting from 1G to 16G.
   ② The vertical line (total 5 lines) of all grids lights up sequentially in the range of 3G to 16 G starting from the left.
   ③ The horizontal line of (total 7 lines) of all grids lights up sequentially in the range of 3G to 16G starting from the top.
   ④ Grids from 5G to 6G go off.

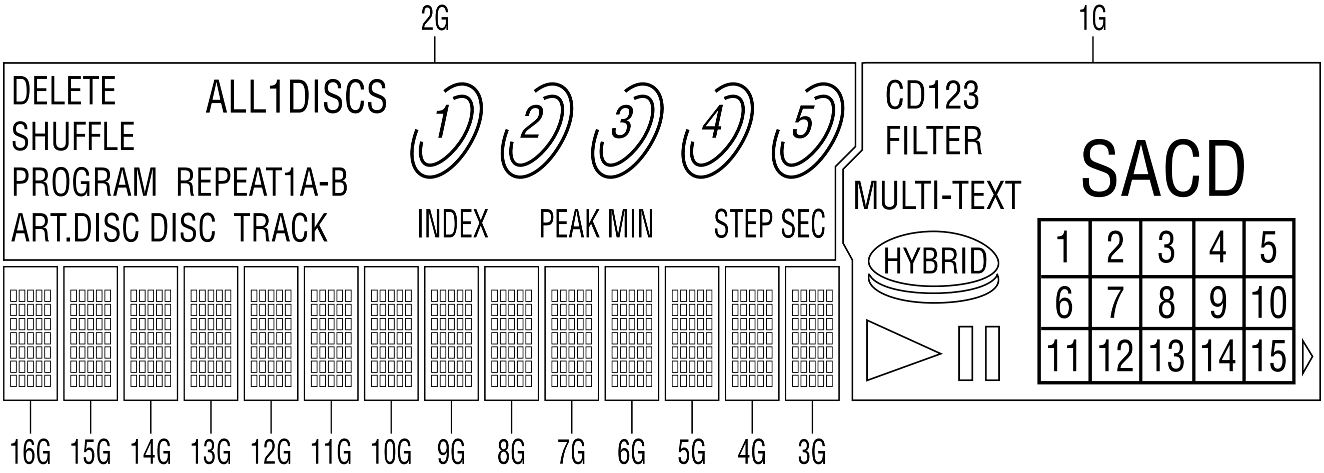
2. With the machine in the status that is set in step 1-④, press any on the remote commander. The grids 1G and 2G go off and then the machine enters the key check standby state. (When the EJECT key or the STOP key is pressed, the reception check is canceled.)

3. After the key check is completed, turn JOG clockwise to turn on the calendar segments sequentially. When the segment "15" is confirmed, turn JOG counter-clockwise that turns off the calendar segment. When the segment "1" is confirmed, this is the end of check.

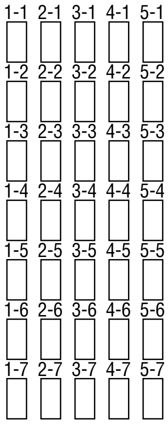
4. After all the checks are completed, confirm to see that the display "%%TEST-END!!%" appears. The message indicates that the check is ended normally.

5. Press the ⏻ button to turn off the main power and disconnect the power plug from the wall outlet.

* In the SCD-C333ES that does not have the MULTI/2CH key, attach the dummy key to the specified position and check the operation. When the check is completed and the main power is turned off, be sure to disconnect the dummy key.

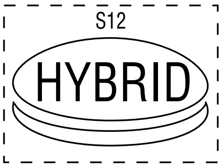


2G
1G
DELETE
ALL1DISCS
SHUFFLE
PROGRAM REPEAT1A-B
ART.DISC DISC TRACK
1
2
3
4
5
INDEX
PEAK MIN
STEP SEC
CD123
FILTER
MULTI-TEXT
SACD
HYBRID
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16G 15G 14G 13G 12G 11G 10G 9G 8G 7G 6G 5G 4G 3G

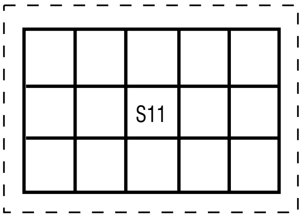


1-1 2-1 3-1 4-1 5-1
1-2 2-2 3-2 4-2 5-2
1-3 2-3 3-3 4-3 5-3
1-4 2-4 3-4 4-4 5-4
1-5 2-5 3-5 4-5 5-5
1-6 2-6 3-6 4-6 5-6
1-7 2-7 3-7 4-7 5-7

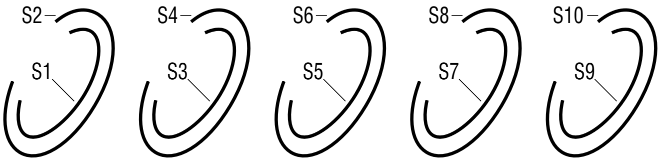
(3G-16G)



(1G)



(1G)



S2
S1
S4
S3
S6
S5
S8
S7
S10
S9

(2G)

This set automatically executes self-diagnosis and various checks by entering the test mode.

Note: This set automatically makes various adjustments according to the type of disc, thereby not requiring adjustment of the set when parts were replaced. However, be sure to execute 6-1. IC AND FLUORESCENT DISPLAY TUBE CHECK, 6-2. AUTO CHECK and 6-8. WAVEFORMS CHECK.

Disc for Test Mode

Various checks of this set require the following discs.

Model	Type *1	Category	Application
SATD-04 (J-2501-184-A)	SL	12 cm disc Reference disc	Adjusted value check, Operation check, Optical waveform check
Not specified	DL	12 cm disc	Operation check
PATD-012 (4-225-203-01) YEDS-18 (3-702-101-01)	CD	12 cm disc Reference disc	Adjusted value check, Operation check, Optical waveform check
Not specified	HYBRID	12 cm disc	Operation check

*1 SL: Single Layer
DL: Dual Layer

Setting Method of Test Mode

Turn the POWER switch on while pressing the |◁◁AMS▷▷| dial and the TIME/TEXT button. Release the TIME/TEXT button and the |◁◁ AMS ▷▷| dial in this order when “TEST MODE Menu” is displayed on the fluorescent display tube. (If the |◁◁AMS▷▷| dial is released first, the test mode becomes active but “TEST MODE Menu” is not displayed)

OPEN/CLOSE key in the TEST mode.

The OPEN/CLOSE key is disabled immediately after the machine enters the TEST mode. Be sure to turn the |◁◁AMS▷▷| dial to select 59 Table Init and push |◁◁AMS▷▷| once. When initialization of the table is completed, the message INITAIL OK appears several seconds on the FL display. After this, the OPEN/CLOSE key is enabled and disc can be inserted and ejected.

When the command 59 Table Init is executed, the same operations of the POWER ON to the disc chucking in the normal operations as described below are performed. However, it presumes that the door and the tray are closed depending on the stop status.

59 Table Init → BU DOWN (disc unchucking) → Table rotates (disc search) → BU UP (disc chucking) at the disc that is found first of all.

When there are no discs, BU UP is executed at the DISC1 position.

Releasing Method of Test Mode

To release the test mode, turn the POWER switch off.

Selection/Entry of Test Mode

To select and enter the “TEST MODE Menu”, operate as follows.

1. Rotate the |◁◁ AMS ▷▷| dial to select the menu, and press the |◁◁ AMS ▷▷| dial to enter.
2. The test is switched on or off alternately each time the |◁◁ AMS ▷▷| dial is pressed.
3. To return to the previous step, rotate the |◁◁ AMS ▷▷| dial to select the desired item, and press the |◁◁ AMS ▷▷| dial to enter.

Test Mode Command List

The contents of test mode are as follows.

Note: Wrong operation in the test mode causes a trouble, thus requiring extreme care.

LINE command (1X): Use mainly for a manufacturing line.

No.	Name	Description	Remarks
05	DSP MON1	XUGF, XPCK, C2PO outputted from IC509 (CD DSP)	Not used for the servicing
06	DSP MON2	MNT0, MNT1, MNT2, MNT3 outputted from IC509 (CD DSP)	Not used for the servicing
07	DSP MON3	RFCK, XPCK, XROF, GTOP outputted from IC509 (CD DSP)	Electrical measurement, CD CLV jitter measurement

STANDARD command (1X): Use when the servo is applied by manual operation.

No.	Name	Description	Remarks
12	LD ON/OFF	The laser diode is turned on or off	On or off are switched alternately
13	SPIN ON/OFF	The spindle motor is rotated with the regulated voltage	On or off are switched alternately
14	FSRV ON/OFF	The focus servo is turned on or off	On or off are switched alternately
15	TSRV ON/OFF	The tracking servo is turned on or off	On or off are switched alternately
16	CLV ON/OFF	The spindle SLV servo is turned on or off Focus and tracking servos must be already turned on	On or off are switched alternately
17	SSRV ON/OFF	The sled servo is turned on or off Focus, tracking and spindle servos must be already turned on	On or off are switched alternately
18	ALL SRV ON	All servos are turned on	
19	ALL SRV OFF	All servos are turned off	Stop command in the test mode

FOCUS command (2X): Focus related. (All servos must be already turned on (except command 21))

No.	Name	Description	Remarks
21	FSRCH ON/OFF	The continuous vertical motion of the optical pick-up lens is turned on or off	Avoid a long-time use
22	F-BIAS UP	Increase focus bias	Focus bias value
23	F-BIAS DOWN	Decrease focus bias	Focus bias value
24	ADJ FCSBIAS	The focus bias is adjusted automatically Both + and - directions are searched to search for best jitter point	
25	FGAIN UP/DW	The focus servo gain is switched between normal and down	Normal or down are switched alternately
26	FJMP UP/DWN	Focus jump is executed UP: layer 0→1, DOWN: layer 1→0	Valid only for DL
27	FOCUS AGC	The focus servo gain is adjusted automatically	
28	DISP FBdata	The focus bias adjusted value is displayed	Hexadecimal display 9 bit data

Note: On or off and up or down are switched alternately

OFFSET (PI, FE, TE) command (3X): Adjusts the offset of PI, FE and TE signals.

No.	Name	Description	Remarks
31	PI/FE OFSET	Adjusts the offset of PI, FE and TE signals This adjustment must be executed after 61 DISC DETECT	TE offset adjustment is executed for the CD only

TRACKING command (4X): Tracking servo related.

No.	Name	Description	Remarks
41	TGAIN NM/UP	The tracking servo gain is switched between normal and up	Normal or up are switched alternately
44	ADJ TRK DSP	The traverse AGC and E-F balance adjustment is performed	
45	TRACKING AGC	The tracking servo gain is adjusted automatically	

SEARCH command (5X): Track search related.(Not used for the servicing)

No.	Name	Description	Remarks
51	1-TRCK JUMP	One-track jump is performed	
52	M-TRCK MOVE	M-track movement is performed	
53	FINE SEARCH	Fine search is performed	
58	CDM Check	Measurement of table rotation hours, tray open/close hours and panel door open close hours	
59	Table Init	Initializes the table.	After this command, the OPEN/CLOSE key is enabled.

DISC DETECT command (6X): Disc type check related.

No.	Name	Description	Remarks
61	DISC DETECT	Disc type check is executed Display after judgment DSKMOD CD: Judged as CD DSKMOD SL: Judged as SACD (SL) DSKMOD DL: Judged as SACD (DL) DSKMOD HLHD: Judged as HYBRID HD DSKMOD CDRW: Judged as CD-RW	Refer to how to apply servo by manual operation (62 page)
62	SET DISC CD	Enter disc type CD setting	CD forced setting
63	SET DISC SL	Enter disc type SL setting	SL forced setting
64	SET DISC DD	Enter disc type DD setting	DD forced setting
65	SET DISC HH	Enter disc type HYBRID HD setting	HD forced setting
66	SET DISC HC	Enter disc type HYBRID CD setting	CD forced setting

TOOLS command (8X): Performs aging, reads adjusting parameters, etc.

No.	Name	Description	Remarks
81	VERSION	Firmware version is displayed	Example: Ver 1.00
83	TRAY AGING	Tray open-close aging is performed Not used for the servicing	Number of times and eccentricity measurement Not used in this set.
84	JITTER	Jitter measurement	Not used for the servicing
85	ERROR RATE	Error rate measurement CD: C1, C2 SACD: PO, PI1, PI2	Error rate Not used for the servicing
86	ALL SRV ON	Apply all servos Full automatic measurement including PI, FE and TE offset adjustment is performed	Use when applying the servo by manual operation Refer to STANDARD command (54 page)
87	DISP ADJ DT	Automatic adjusting parameters are displayed The offset adjusted values are scroll-displayed in order of RF, VC, FE and TE	Refer to auto check items (59 page) Refer to auto check items (59 page)
8d	Set Up Init	Set to factory shipping mode PLAY, REPEAT, DIGIFIL, etc. are initialized	Set when repair completed Refer to 6-7. SHIPPING MODE (64 page)
8F	49 TRCK JIT	Used for jitter measurement of 49th music on SACD-S4	For manufacturing line Not used for the servicing

QA command (9X)

No.	Name	Description	Remarks
92	SET CHECK	The set is checked	Refer to 6-2. AUTO CHECK (59 page)
94	SET AGING	The set aging is performed Repeat by the specified number of times or until an error occurred	Refer to 6-6. AGING MODE (64 page)
95	DISPLAY ERROR	The content of error recorded to the set is read and displayed (Error recording) Only one item is recorded	
96	D-OUT OnOff	Digital out of CD is turned on or off	Not used in this set.
98	APDO JITTER		Not used for the servicing
9C	BU DENCHO	The content of error recorded to the set is read, and then the S curve waveform, traverse waveform, and RF waveform can be checked successively	Refer to 6-8.WAVEFORMS CHECK (66page)
9D	P-ON HOUR	Approximate cumulative power supplying time is displayed (Initialized by 8d command)	In unit of 1 hour
9E	RFD OUT	RFD output is turned on or off SACD jitter measuring mode	Not used for the servicing

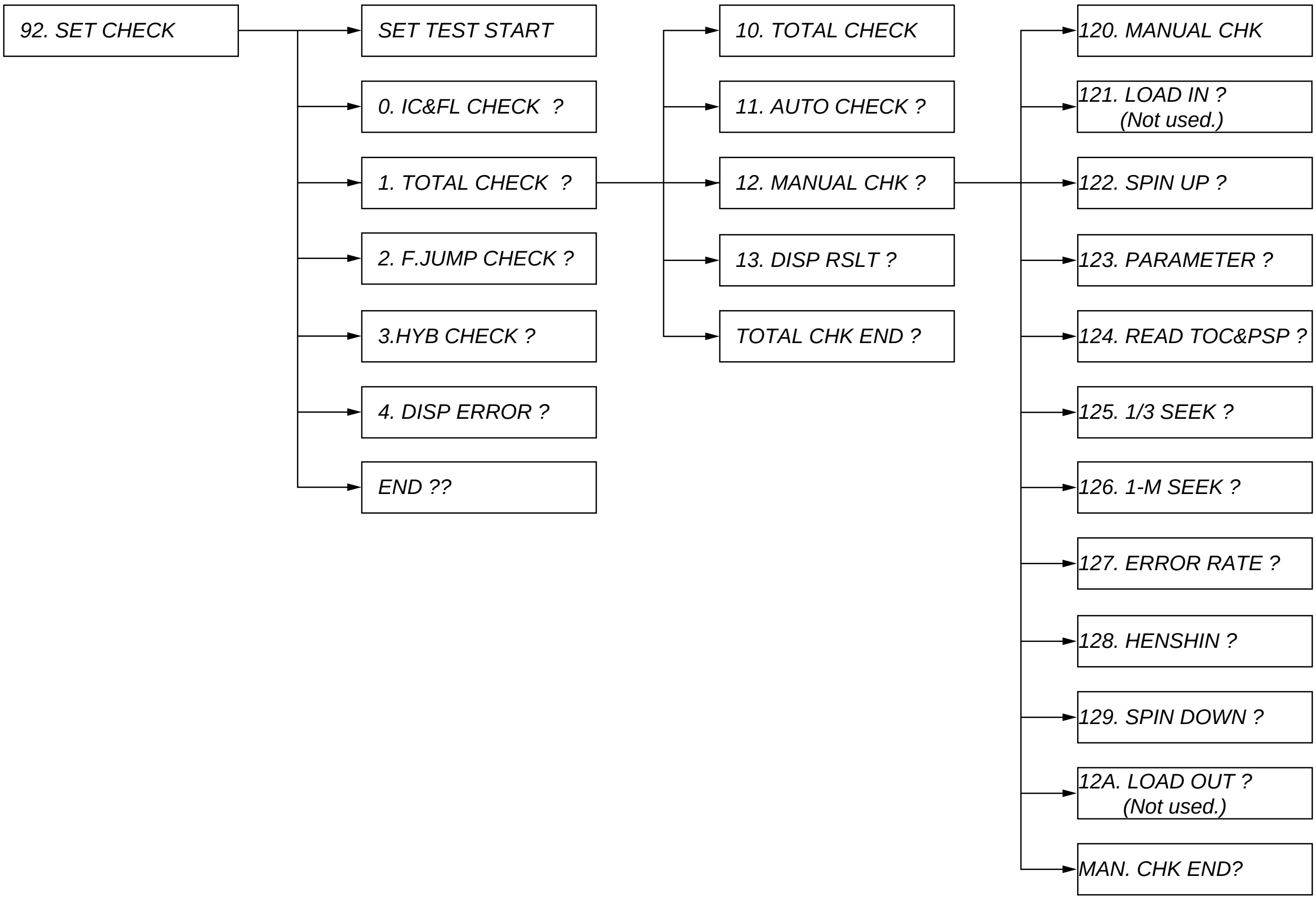
How to Apply Servo by Manual Operation

In analyzing failures of the set, the servo may be applied by manual operation. To apply servo in the test mode, use the following method.

1. After setting the test mode, rotate the |◁◁ AMS ▷▷| dial to select a command, and press the |◁◁ AMS ▷▷| dial to enter.
2. “61 DISC DETECT” (Disc type check)→“86 ALL SRV ON” (All servos on + auto adjustment)
3. If applying servo while checking the condition one by one, “61 DISC DETECT” (Disc type check)→“31 PI/FE OFSET” (Offset automatic adjustment)→“14 FSRV ON/OFF” (Focus servo on)→“16 CLV ON/OFF” (CLV servo on)→“44 ADJ TRK DSP ” (E-F balance adjustment)→“15 TSRV ON/OFF” (Tracking servo on)→“17 SSRV ON/OFF” (Sled servo on)→“24 ADJ FCSBIAS” (Focus bias adjustment)→“27 FOCUS AGC” (Focus auto gain adjustment)→“45 TRACKING AGC” (Tracking auto gain adjustment).

Note: 1. On and off are alternately switched in the same command.
2. For a stop, select “19 ALL SRV OFF” and press the |◁◁ AMS ▷▷| dial.

Set Check


92. SET CHECK
SET TEST START
0. IC&FL CHECK ?
1. TOTAL CHECK ?
2. F.JUMP CHECK ?
3.HYB CHECK ?
4. DISP ERROR ?
END ??
10. TOTAL CHECK
11. AUTO CHECK ?
12. MANUAL CHK ?
13. DISP RSLT ?
TOTAL CHK END ?
120. MANUAL CHK
121. LOAD IN ?
(Not used.)
122. SPIN UP ?
123. PARAMETER ?
124. READ TOC&PSP ?
125. 1/3 SEEK ?
126. 1-M SEEK ?
127. ERROR RATE ?
128. HENSHIN ?
129. SPIN DOWN ?
12A. LOAD OUT ?
(Not used.)
MAN. CHK END?

Press the |◁◁AMS▷▷| dial when No.□□□□□ □□□□□*1 is displayed, and a checking for that display will start or the lower layer will be selected. For the selection on the same layer, rotate the |◁◁ AMS ▷▷| dial. It is looped on the same layer, and when “END?” is displayed, press the |◁◁ AMS ▷▷| dial to return to the upper layer.

*1 □ denotes a displayed character.

Manual Check Method

In the “12. MANUAL CHK”, individual checks (121. LOAD IN to 12A. LOAD OUT) are possible.

Example: If 124. READ TOC of 12. MANUAL CHECK is to be checked.

Setting Method:

1. After setting the test mode, rotate the |◁◁ AMS ▷▷| dial to select “92. SET CHECK” and press the |◁◁ AMS ▷▷| dial to enter.
2. When “SET TEST START” is displayed, rotate the |◁◁ AMS ▷▷| dial clockwise by 2 clicks to select “1. TOTAL CHECK?” and press the |◁◁ AMS ▷▷| dial to enter.
3. When “10. TOTAL CHECK” is displayed, rotate the |◁◁ AMS ▷▷| dial clockwise by 2 clicks to select “12. MANUAL CHK?" and press the |◁◁ AMS ▷▷| dial to enter.
4. When “120. MANUAL CHK” is displayed, rotate the |◁◁ AMS ▷▷| dial clockwise by 4 clicks to select “124. READ TOC&PSP?” and press the |◁◁ AMS ▷▷| dial to enter.
5. A checking will start automatically.

Note: In making a check, the disc must be loaded. Immediately when a check started, the tray is drawn into the set. Also, the tray can be opened/closed even during the set check mode.

6-1. IC AND FLUORESCENT DISPLAY TUBE CHECK (SELF-DIAGNOSIS)

The communication between microcomputer and main ICs (self-diagnosis) and the fluorescent display tube all lit are checked.

Checking Method:

1. After setting the test mode, rotate the |◁◁ AMS ▷▷| dial to select “92. SET CHECK” and press the |◁◁ AMS ▷▷| dial to enter.
2. When “SET TEST START” is displayed, rotate the |◁◁AMS▷▷| dial clockwise by 1 click to select “0. IC&FL CHECK?” and press the |◁◁ AMS ▷▷| dial to enter.
3. A checking will start automatically, and “0. IC&FL CHECK” will be displayed. (Checking time is about 3 seconds)
4. After IC communication check, all segments of fluorescent display tube will be lit. At this time, check visually for a skipped character.
5. At successful completion of check, “0. IC CHECK OK” is displayed. In this case, no error exists in the IC interface. Proceed to 6-2. AUTO CHECK.

Note: The check mentioned above tests the communication from microcomputer to main ICs. Even if the check successfully finished, the IC to be checked is not always normal. Consider it for reference only.

6. In case of an IC communication error, the following display will be given during the checking. Possible causes of error are as listed below.

Error display	Causes (typical example)
DVD DEC. ERROR	1. IC701 (SACD decoder) is faulty 2. IC701 pin (160)(XRST) does not go “H” • IC901 pin ㊹ (XDIS) does not go “H” • IC902 (expander) is faulty 3. 768fs (33.86688 MHz) is not present to IC701 pin (167)(XTAL) • IC811 (3-multiplying circuit) is faulty • Clock signal 256fs is not sent from AUDIO board (CN901 pin ⑮) • CN901 pin ⑯ (DFGND) and pin ⑭ (DF3V) are open or shorted • CN901 pin ⑯ (DFGND) and pin ⑭ (DF3V) are open or shorted • CN901 and FFC connection is loose, or FFC is disconnected
DVD DRAM ERR	1. IC706 (D-RAM) is faulty 2. IC701 pin (160)(XRST) does not go “H” • IC901 pin ㊹ (XDIS) does not go “H” • IC902 (expander) is faulty 3. Faulty communication line between IC701 and IC706 • Data line, address line, WE, etc. 4. D903 (1SS367) is faulty
CD DSP ERROR	1. IC509 (CD DSP) is faulty 2. 768fs (33.86688 MHz) is not present to IC509 pin (71) (XTAL) Same as cause 3 of DVD DEC. ERROR 3. IC509 pin ② (XRST) does not go “H” • IC901 pin ㊹ (XDIS) does not go “H” • IC902 (expander) is faulty
D/A ERROR	1. IC904 (D/A converter) is faulty 2. Faulty IC703 (jitter amplifier) peripheral circuits 3. IC901 pin (64) (JIT) is faulty
EEPROM ERROR	1. IC903 (EEPROM) is faulty
PRAWN DRAM ERR *1	1. IC808 (D-RAM) is faulty 2. IC801 (DSD decoder) is faulty 3. 768fs (33.86688 MHz) is not present to IC801 pin ⑭ (MCKI) Same as cause 3 of DVD DEC. ERROR 4. IC801 pin ⑬ (XRST) does not go “H” • IC901 pin ㊹ (XDIS) does not go “H” • IC902 (expander) is faulty 5. Faulty communication line between IC801 and IC808 • Data line, address line, WE, etc. 6. D903 (1SS367) is faulty D+3.3V is not present to IC808
RF AMP ERROR	1. IC001 (RF AMP) is faulty 2. Loose connection between CN503 on MAIN board and CN001 on RF board, or FFC disconnection CN503 pin ⑲ (CLK RF), pin ⑳ (DATA RF) and pin ㉑ (SDEN) must be checked
SRAM ERROR	1. IC908 (SRAM) is defective. 2. IC907, IC909 (address conversion IC) are defective. 3. The power voltage (3.3 V) is not supplied to IC908. C963 (Dual layer capacitor for backup) is defective. Q905 is defective. 4. IC908 pin-20 (XCE) does not go low. Q901 (digital transistor) is defective. D902 is defective.

*1 DSD decoder is also checked.

Causes Common to Each IC:

1. Faulty communication line between microcomputer and each IC.
   Disconnected patterns, floating series resistors, bridge, etc.
2. Faulty IC supply voltage.
   Particularly, check D+3.3V voltage. (D+5V for display microcomputer)
3. The power supply voltage for the IC is 3.3V that is generated by dividing the D5V using the voltage dividing with resistor network and transistor for SRAM (IC908).
4. Faulty microcomputer communication port to each IC

Note: In case of more than two errors, the error display is switched over one after another, thus making the reading difficult.
In such a case, press again the |◁◁ AMS ▷▷| dial to make a recheck for error reading.

6-2. AUTO CHECK (AUTOMATIC VARIOUS MEASUREMENTS)

The auto check is performed to check if the set operates stably. Though a checking is made automatically, whether the measured data are within the specification is evaluated by the service person. The auto check results in NG immediately, if the check itself causes an error.

Setting Method of Auto Check Mode:

1. After setting the test mode, rotate the ⏮ AMS ⏭ dial to select “92. SET CHECK” and press the ⏮ AMS ⏭ dial to enter.
2. When “SET TEST START” is displayed, rotate the ⏮ AMS ⏭ dial clockwise by 2 clicks to select “1. TOTAL CHECK?” and press the ⏮ AMS ⏭ dial to enter.
3. When “10. TOTAL CHECK” is displayed, rotate the ⏮ AMS ⏭ dial clockwise by 1 click to select “11. AUTO CHECK?”.

CD and SACD (SL) Disc Operation Check

Checking method:

1. Press the OPEN/CLOSE button to open the tray and place the test disc *1. The OPEN/CLOSE key is disabled immediately after the machine enters the TEST mode. Be sure to initialize the table.
2. Press the ⏮ AMS ⏭ dial, and the following check will be performed automatically.
3. Finally, the test disc will be ejected and the auto check will finish.
4. “AUTO CHECK OK” will be displayed at successful completion of auto check.
5. Recheck is enabled if the ⏮ AMS ⏭ dial is pressed in step 4. (Also, use this operation when exchanging the test disc)
6. In case of an error during the checking, the check is interrupted automatically and the error is displayed. (Error display example: “DISC DETECT ERROR”) After error display, “CONT?STOP (J/S)” is displayed. In this case, if the ⏮ AMS ⏭ dial is pressed, the check where the error occurred is skipped and you can proceed to the next check. Also, ■ if button is pressed, the check finishes and “AUTO CHECK NG” is displayed when even one NG item exists.

*1 Use PATD-012 or YEDS-18 for CD, and SATD-S4 for SACD (SL). Using another disc will result in a checking failure.

Check Items:

Items	Description	Remarks
LOAD IN TIME (msec)	Time until a disc is chucked from the state where loading tray is out	Loading in switch H→L
SPIN UP TIME (msec)	Time from spindle kick to PLL lock	Lock signal L→H
RF/VC/FE/TE (ORG)	Offset values before RF (PI), VC, FE, TE signal offset adjustment RF (8 bit data in hex notation) VC, FE, TE (9 bit data in hex notation)	At offset 0 RF: A0h VC, FE, TE: 00h
RF/VC/FE/TE (ADJ)	Offset values after RF (PI), VC, FE, TE signal offset adjustment (Less than ORG value if offset correction is normal) RF (8 bit data in hex notation) VC, FE, TE (9 bit data in hex notation)	VC offset is not adjusted (Measurement only) Also, for SACD, the TE offset is not measured and adjusted
PI/TRVS PP (ORG/ADJ)	PI (ORG): PI value at disc type check (decimal data) PI (ADJ): PI value after PI offset adjustment (read value at microcomputer A/D) (decimal data) TRVS PP (ORG): Traverse level before level correction (AGC) (decimal data) TRVS PP (ADJ): Traverse level after level correction (AGC) (decimal data)	PI level conversion Read value × 12.9mV Traverse level conversion Read value × 12.9mV 12.9mV=3.3V ÷ 256 (8 bit)
PIOR/CCR/TRCR	PIOR: Set value of PI offset coarse adjusting register CCR: Set value of FE offset coarse adjusting register TRCR: Set value of TE offset coarse adjusting register	Registers in RF amplifier
FOCUS/TRK GAIN	Auto gain adjusted values of focus and tracking servos (8 bit data in hex notation)	Reference: 30h
FBIAS/TRVSC/TRCR2/CFR	FBIAS: Focus bias set value (9 bit data in hex notation) TRVSC: Traverse center value (9 bit data in hex notation) TRCR2: Set value of E-F balance coarse adjusting register CFR: Set value of traverse level adjusting register	TRCR2 adjusts the E-F gain balance and used for CD only (Fixed to 06 for SACD) TRCR2 and CFR are registers in RF amplifier
MIN JITTER AT F.BIAS	Minimum jitter value in focus bias adjustment (CD only)	Correlative with RF jitter
READ TOC TIME (msec)	Time required for TOC reading	
PSP AMPLITUDE		SACD only
1/3 SEEK TIME F) AVE/MIN/MAX (msec): R) AVE/MIN/MAX (msec):	Seek time between 1/3LBA and 2/3LBA of the disc 1/3LBA→2/3LBA average/minimum/maximum 2/3LBA→1/3LBA average/minimum/maximum	LBA: Absolute address
1/MAX SEEK TIME F) AVE/MIN/MAX (msec): R) AVE/MIN/MAX (msec):	Seek time between most inward track (0LBA) and most outward track max LBA most inward→most outward average/minimum/maximum most outwar→most inward average/minimum/maximum	
ERROR RATE	Error rate measurement For CD: Average value/Maximum value of C1 and C2 For SACD: Average value/Maximum value of PO, PI1 and PI2	Measure for 10 sec at track No.5 For the SACD, 160 block data except the data under tracking jump

Items	Description	Remarks
HENSIN	Eccentricity measurement Eccentricity (actual eccentric amount) of disc, disc pulley total	For the CD only are measured • Read by dividing by 10 • 0 may be displayed if eccentricity is small (10um or less) (Due to measurement reason)
SPIN DOWN TIME (msec)	Time from spindle brake application to rotation stop	For CD: Over 64 monitoring For SACD: VCO1D monitoring
LOAD OUT TIME (msec)	Time until loading table comes out from the state where a disc is in chuck	Loading out switch H→L

Measured Data Reading Method:

To judge the check result, the measured data must be read.

1. When “AUTO CHECK OK” is displayed, rotate the |◁◁ AMS ▷▷| dial clockwise by 2 clicks.
2. When “13. DISP RSLT?” is displayed, press the |◁◁ AMS ▷▷| dial to enter.
3. “PLEASE WAIT” will be displayed and in several seconds, “13. DISP RESULT” will be displayed.
4. Rotate the |◁◁ AMS ▷▷| dial clockwise by 1 click, and the “LOAD IN” will be displayed.
5. Press the |◁◁ AMS ▷▷| dial to enter. The LOAD IN TIME measured value will be displayed.
6. Compare the displayed value with the following specified value.
7. Hence, repeat step 4 to 6 (display is variable) and read the measured data respectively.
8. Compare the measured data with the specified value to check for NG item.

Note: Blank display of measured value means that an error occurred during the checking or no measurement was taken place.

Specified Value:

(1) SACD (Use the test disc SATD-S4)

Note: Measured values in check items are typical ones.

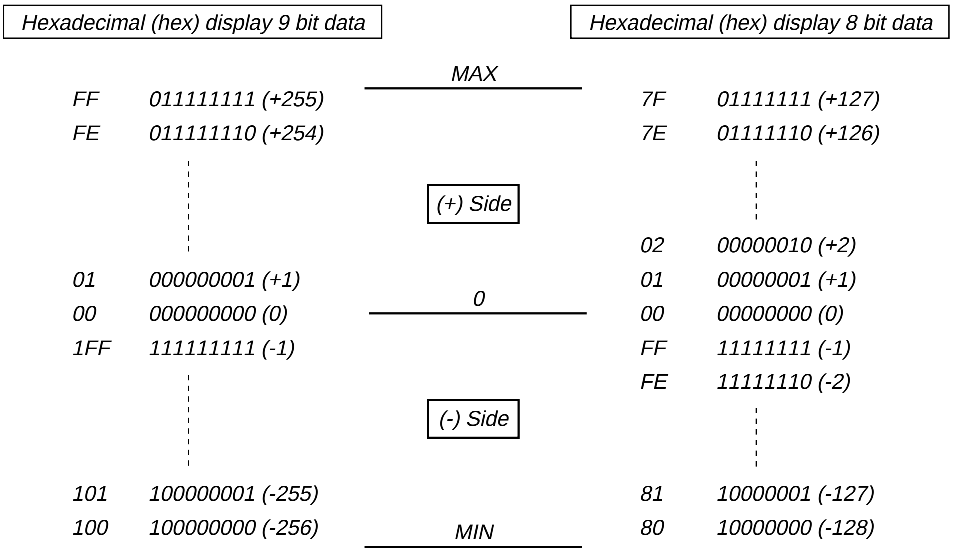
Check items		Specified value
LOAD IN TIME (msec)	:	Not displayed in this set.
SPIN UP TIME (msec)	: 1652	2000 msec or less
RF/VC/FE/TE AVRG (ORG)	: 98, C, 1DE, 0	RF: 80-9B, VC: 1F1-10, FE: 1d8-42, TE: 1BB-5C
RF/VC/FE/TE AVRG (ADJ)	: 9F, C, 4, 0	RF: 98-A5, VC : 1F1-10, FE: 1F1-10, TE: 1F1-10
PI/TRVS PP (ORG/ADJ)	: 81, 131, 78, 105	PI ORG: 70-8A, PI ADJ: 122-135
PIOR/CCR/TRCR	: 1A, 31, 1F	No specified value given
FOCUS/TRK GAIN	: 2E, 24	FOCUS: 1C-45, TRK: 1C-45
FBIAS/TRVSC/TRCR2/CFR	: 2,13, 6, 60	F.BIAS: 1D0-4F, TRVSC: 1D0-35 TRCR2, CFR: no specified value given
READ TOC TIME (msec)	: 1283	2500 msec or less
PSP AMPLITUDE	: 1666	1200 msec or above
1/3 SEEK TIME		
F) AVE/MIN/MAX (msec)	: 967, 928, 990	AVE: 1200 msec or less, MAX: 1500 msec or less
R) AVE/MIN/MAX (msec)	: 974, 933, 993	AVE: 1200 msec or less, MAX: 1500 msec or less
1/MAX SEEK TIME		
F) AVE/MIN/MAX (msec)	: 1958, 1938, 1968	AVE: 2500 msec or less, MAX: 3000 msec or less
R) AVE/MIN/MAX (msec)	: 1915, 1909, 1935	AVE: 2500 msec or less, MAX: 3000 msec or less
ERROR RATE		
PO MAX/AVE FRAME	: 0, 0	No specified value given
PO MAX/AVE NUM	: 160, 3	MAX: 1000 msec or less, AVE: 200 msec or less
PI1 MAX/AVE FRAME	: 0, 0	No specified value given
PI1 MAX/AVE NUM	: 242, 17	MAX: 1000 msec or less, AVE: 200 msec or less
PI2 MAX/AVE FRAME	: 0, 0	No specified value given
PI2 MAX/AVE NUM	: 128, 2	MAX: 1000 msec or less, AVE: 200 msec or less
SPIN DOWN TIME (msec)	: 1342	2000 msec or less
LOAD OUT TIME (msec)	:	Not displayed in this set.

(2) CD (Use the test disc PATD-012 or YEDS-18)

Note: Measured values in check items are typical ones.

Check items	Specified value
LOAD IN TIME (msec) :	Not displayed in this set.
SPIN UP TIME (msec) : 1372	1700 msec or less
RF/VC/FE/TE AVRG (ORG) : 98, C, 1D6, 4	RF: 80-9B, VC: 1F1-10, FE: 1d8-42, TE: 1BB-5C
RF/VC/FE/TE AVRG (ADJ) : 9F, A, 1FF, 4	RF: 98-A5, VC: 1F1-10, FE: 1F1-10, TE: 1F1-10
PI/TRVS PP(ORG/ADJ) : 81, 131, 95, 92	PI ORG: 70-8A, PI ADJ: 122-135
PIOR/CCR/TRCR : 1A, 11, 1F	No specified value given
FOCUS/TRK GAIN : 2E, 2D	FOCUS: 1C-45, TRK: 1C-45
FBIAS/TRVSC/TRCR2/CFR : 0, 10, 5, A0	F.BIAS: 1E0-30, TRVSC: 1F0-10 TRCR2, CFR: no specified value given
MIN JITTER AT F.BIAS : 94	180 or less
READ TOC TIME (msec) : 1410	2500 msec or less
1/3 SEEK TIME F) AVE/MIN/MAX (msec) : 824, 804, 850 R) AVE/MIN/MAX (msec) : 850, 833, 860	 AVE: 1100 msec or less, MAX: 1400 msec or less AVE: 1100 msec or less, MAX: 1400 msec or less
1/MAX SEEK TIME F) AVE/MIN/MAX (msec) : 2086, 1999, 2151 R) AVE/MIN/MAX (msec) : 1805, 1793, 1835	 AVE: 2400 msec or less, MAX: 2800 msec or less AVE: 2400 msec or less, MAX: 2800 msec or less
ERROR RATE C1 MAX/AVE : 3, 0 C2 MAX/AVE : 0, 0	 C1 MAX: 30 or less C2 MAX: 0
HENSHIN RYOU (1/10um) : 89	1000 or less (100 um or less)
SPIN DOWN TIME (msec) : 1272	1700 msec or less
LOAD OUT TIME (msec) :	Not displayed in this set.

Note: RF, VC, FE, TE, FBIAS and TRVSC measured values are hexadecimal data with positive and negative signs. When comparing the measured value with the specified value, refer to the following.


Hexadecimal (hex) display 9 bit data
Hexadecimal (hex) display 8 bit data
MAX
FF 011111111 (+255)
FE 011111110 (+254)
7F 01111111 (+127)
7E 01111110 (+126)
(+) Side
02 00000010 (+2)
01 000000001 (+1)
01 00000001 (+1)
0
00 000000000 (0)
00 00000000 (0)
1FF 111111111 (-1)
FF 11111111 (-1)
FE 11111110 (-2)
(-) Side
101 100000001 (-255)
81 10000001 (-127)
100 100000000 (-256)
80 10000000 (-128)
MIN

6-3. SACD (DL) DISC OPERATION CHECK

(• Perform as necessary)

The stability of the set can be checked by repeating the combined operation of focus jump (layer 0→1, layer 1→0) and access to the most inward track←→most outward track by the set number of times or until an error occurs using the dual layer HD disc, DL disc.

A set of operation including an access to the layer 0 (most inward track)→layer 0 (most outward track)→focus jump (layer 0→1)→layer 1 (most outward track)→layer 1 (most inward track)→focus jump (layer 1→0) is carried out repeatedly by the set number of times.

Checking Method:

1. After setting the test mode, rotate the |◁◁ AMS ▷▷| dial to select "92. SET CHECK" and press the |◁◁ AMS ▷▷| dial to enter.
2. When "SET TEST START" is displayed, rotate the |◁◁ AMS ▷▷| dial clockwise by 3 clicks to display "2. F.JMP CHECK?".
3. Press the OPEN/CLOSE button to open the tray, and place the DL disc.
4. Press the |◁◁ AMS ▷▷| dial to load the tray into the set.
5. "NOW SET UP" will be displayed and the DL disc setup will start. (It takes about ten and several seconds to set up the disc as two layers of layer 0 and layer 1 are adjusted)
6. At the completion of setup, "F.JUMP TIMES" will be displayed.
7. Rotate the |◁◁AMS▷▷| dial clockwise by 5 clicks to display "5". (If 5 sets of operation is executed *1)
8. Press the |◁◁ AMS ▷▷| dial, and the check will start.
9. Immediately when the check finished, "UP MAX □□□□"→"UP AVE □□□□"→"DW MAX □□□□"→"DW AVE □□□□"→"F.JMP OK TIMES" will be displayed repeatedly. (□ denotes the measured value in msec)
   UP MAX: Max time required for layer 0 (most inward track)→layer 0 (most outward track)→focus jump (layer 0→1)
   UP AVE: Average time required for layer 0 (most inward track)→layer 0 (most outward track)→focus jump (layer 0→1)
   DW MAX: Max time required for layer 1 (most outward track)→layer 1 (most inward track)→focus jump (layer 1→0)
   DW AVE: Average time required for layer 1 (most outward track)→layer 1 (most inward track)→focus jump (layer 1→0)
   Specified value: 7000 msec or less (if no error occurred)
   If an error occurred due to defocusing during the checking, refer to the following error list. (64 page)
10. Press the OPEN/CLOSE button, and the disc will be ejected and the check will finish. Also, if the |◁◁ AMS ▷▷| dial is pressed in step 9, "2. F.JUMP CHK OK" will be displayed. Then, if the |◁◁ AMS ▷▷| dial is again pressed, "2. F.JMP CHECK" will be displayed instantaneously and a recheck is enabled from the step 5 in the same manner.

*1 Setting arbitrary number of times instead of 5 allows the checking to be repeated by the set number of times. Also, setting 0 (zero) allows the aging check to be repeated until an error occurs.

6-4. HYBRID DISC OPERATION CHECK

(• Perform as necessary)

This test checks the auto adjustment time required when the disc is switched between HD (SACD) layer and CD layer. This test is conducted to check the stability in switching from CD to SACD, or SACD to CD in the HYBRID disc.

A set of operation including CD layer stop state→HD layer auto adjustment→HD layer TOC reading→HD layer stop state→CD layer auto adjustment→CD layer TOC reading→CD layer stop state is repeated by the set number of times.

Checking Method:

1. After setting the test mode, rotate the |◁◁ AMS ▷▷| dial to select "92. SET CHECK" and press the |◁◁ AMS ▷▷| dial to enter.
2. When "SET TEST START" is displayed, rotate the |◁◁ AMS ▷▷| dial clockwise by 4 clicks to display "3. HYB CHECK?".
3. Press the OPEN/CLOSE button to open the tray, and place the HYBRID disc.
4. Press the |◁◁ AMS ▷▷| dial to load the tray into the set.
5. "NOW SET UP" will be displayed and the HYBRID disc setup will start. (It takes about several seconds to set up the disc *1)
6. At the completion of setup, "CHANGE TIMES?" will be displayed.
7. Rotate the |◁◁AMS▷▷| dial clockwise by 5 clicks to display "5" (if 5 sets of operation is executed *2)
8. Press the |◁◁AMS▷▷| dial, and "START" will be displayed and the check will start. During the check, the following will be displayed.
   "CD—>HD" display: Time from switching from CD layer to HD layer up to start of play is measured.
   "HD—>CD" display: Time from switching from HD layer to CD layer up to start of play is measured.
9. Immediately when the check finished, "CD MAX □□□□"→"CD AVE □□□□"→"HD MAX □□□□"→"HD AVE □□□□" will be displayed repeatedly. (□ denotes the measured value in msec)
   Specified value: 10000 msec or less (if no error occurred)
   If an error occurred due to defocusing during the checking, refer to the following error list. (64 page)
10. Press the OPEN/CLOSE button, and the disc will be ejected and the check will finish. Also, if the |◁◁ AMS ▷▷| dial is pressed in step 9, "HYB CHK OK" will be displayed. Then, if the |◁◁AMS▷▷| dial is again pressed, "HYBRID CHECK" will be displayed instantaneously and a recheck is enabled from the step 5 in the same manner.

*1 "NOW SET UP" display may continue for several minutes and an error may be displayed depending on the discs. In this case, press the |◁◁ AMS ▷▷| dial again.

*2 Setting arbitrary number of times instead of 5 allows the checking to be repeated by the set number of times. Also, setting 0 (zero) allows the aging check to be repeated until an error occurs

6-5. CDM59 and the Door Check

Measurement of table rotation hours, tray open/close hours and panel door open close hours can be executed together with CDM59.

Procedure

1. Enter the TEST mode. Turn the |◁◁AMS▷▷| dial and select 59 Table Init. Press |◁◁ AMS ▷▷| once (that enables the OPEN/CLOSE key.)
2. When the message INITIAL OK appears, press the OPEN/CLOSE key to eject the tray. Place a disc in the DISC1 of the table. (Be sure to place a disc in DISC1. If a disc is placed in any locations other than DISC1, the correct measurement cannot be executed. Therefore, be sure to place a disc in DISC by using the DISC SKIP key.)
3. Select 58 CDM Check by turning |◁◁AMS ▷▷| and press |◁◁AMS ▷▷| once.
4. Measurement starts automatically.
5. When the measurement is completed, the message DOOR OP ☐☐.☐ (☐ is a decimal number) appears on the FL display.
6. Result of measurement can be check by turning |◁◁AMS▷▷|. If any measurement item does not meet specification, a message “ng” is displayed next to the measurement value.
7. When you want to repeat the test, press |◁◁AMS▷▷| again.
8. Press the OPEN/CLOSE key to terminate the test and remove the disc.
   - * 1.The measurement can be performed without placing a disc. However, the BU chucking time and unchucking time will be slightly different from the actual values.
   - * 2.When the machine enters this mode once, it cannot return to the normal test mode. If any other tests are desired, turn off the main power once and then back on again to enter the test mode.

Measurement items and specifications

Measurement item	Description	Specifications (unit: second)
RL	Time required for the table to make one complete rotation. (R: Clockwise rotation. L: Counter-clockwise rotation)	6.0 to 7.5
DOOR OP	Time required to open the panel door	<10.0
CLOSE	Time required to close the tray.	<2.3
BU UP	Time required for the BU block to perform chucking from the DOWN position	<1.3
EXOPEN	The XCHANGE OPEN time	<2.5
EXCLOSE	The EXCHANGE CLOSE time	<2.8
BU DOWN	Time required for the BU block to perform unchucking and going to the DOWN position	<0.9
OPEN	Time required to open the tray	<2.4
DOOR CL	Time required to close the panel door.	<10.0

If the panel door cannot be opened, the time-out error is triggered and the measurement is also stopped at this stage. Note that the tray can push the door forcibly as the software judges the door as it is in the OPEN state, if the door open/close detector switches (S1022 and S1023 on the DOOR SW board) have abnormality.

6-6 . AGING MODE

(• Perform as necessary)

6-6-1. The aging can be performed to the set in the test mode.

The aging can be continued by the set number of times or until an error occurs.

In the aging, the following operations are repeated.

Table turn→Disc chucking→Disc detect→Servo on→Auto adjustment→TOC reading→Play of first track for 5 second→Play of last track for 5 second→Play of first track for 5 second→Disc unchucking

Setting Method:

1. After setting the test mode, rotate the |◁◁ AMS ▷▷| dial to select “94. SET AGING” and press the |◁◁ AMS ▷▷| dial to enter.
2. When “AGING TIMES” is displayed, rotate the |◁◁AMS▷▷| dial to set the number of aging times. (For the number of times, every 10 times can be set. Setting 0 (zero) eliminates the count limitation where the aging is repeated until an error occurs)
   Note: Do not perform unmanned overnight aging..
3. Press the |◁◁ AMS ▷▷| dial, and “AGING START” will be displayed instantaneously, then “DISC IN & JOG ON” will be displayed and the tray will come out automatically.
4. Place a disc (CD or the SACD SL disc) on the tray. In the case of SCD-C333ES, the multiple discs can be placed. Even when the discs (CD or the SACD SL disc) of different types are mixed, the aging test can be performed. Use the DISC SKIP key when placing a disc. When discs are placed in positions, turn the |◁◁ AMS ▷▷| dial.
5. The aging test starts.
6. At the completion of aging by the set number of times, the tray will come out automatically and the check will stop.
   Typical time required for aging About 1 hour/100 times
   “AGING SUCCESS!” will be displayed if no error occurred in the aging, or the error will be displayed if an error occurred. (Refer to the following error list)

6-6-2. Aging Mode of the Panel Door Independently

1. Start up the unit in the normal operation mode.
2. While press the STOP key, turn the |◁◁AMS▷▷| dial and then press the CONTINUE key. (The program does not advance if these keys are not pressed in the above sequence.)
3. The panel door repeats opening and closing.
4. The messages “AP-B 000000” (during open) → “AP-C 000000” (during close) are repeated on the FL display. Number of times of open/close are displayed in decimal number in “000000” with OPEN/CLOSE as a set.
5. Press the STOP key to terminate the aging mode and to return to the normal mode.

6-7. SHIPPING MODE

The repaired set must be initialized, and for this purpose the set should be set to the shipping mode.

Setting Method:

1. After setting the test mode, rotate the |◁◁ AMS ▷▷| dial to select “8d Set Up Init” and press the |◁◁ AMS ▷▷| dial to enter.
2. “8D 000000000 00” will be displayed, and if the scroll starts in the left direction, the set initialization has completed
3. Press the POWER button to turn the power off.

Note: Take care not to leave the test disc in the set.

The following setups are established in the SHIPPING MODE

1. Initialization of EEPROM (IC903)
   • PLAY MODE ALL DISCS, CONTINUE
   • COMMAND MODE CD1
   • LAYER SELECT SACD
   • DIGITAL FILTER STD
   • Resetting the accumulated hours meter.
2. Initialization of SRAM (IC908) (Erasing data of DISC MEMO)
3. Chucking at the DISC1 position.

Error List

An error occurring during the check in the aging mode of the test mode is displayed automatically (scroll display) immediately when the error occurred.

< How to view the error history >

1. Select “95 DISP ERROR” with the |◁◁ AMS ▷▷| key, and press the |◁◁ AMS ▷▷| key once.
2. The error that has occurred lastly in the set and the signal status (H = 1, L = 0) at that time are displayed on the FL display by scrolling. (Types of the errors and the signal status that can be checked, are the same as the error display of the aging mode.)
3. Press the |◁◁ AMS ▷▷| key once again to show the error history repeatedly.
4. When the error history is displayed with scrolling once, the mode returns to the normal test mode.

Error display is as follows.

Error name, Disc type, IN SW (Sled in switch state), FOK (FOK signal state), LOCK (LOCK signal state), From (Displayed if effective), To (Displayed if effective), Aging times (Displayed in aging mode only)

Display example

ACCESS MOVE ERROR : SACDSL : IN SW 1 FOK 0 LOCK 0 : FROM 205663 : TO 2461601 : TIMES 5

(Error name) (Disc type) (Sled in switch, FOK, LOCK signal state) (Relative address) (Relative address)(Aging times)

Display Items List:

Display items	Description	Remarks
Error name	→Refer to the error display list	
IN SW	Sled in switch state when an error occurred 0: switch off Not limit in 1: switch on Limit in (Optical pick-up is at most inward track)	
FOK	FOK signal state when an error occurred FOK signal Is focus on? 0: FOK L (Focus off), 1: FOK H (Focus on)	
LOCK	LOCK signal state when an error occurred. LOCK signal Is PLL lock? 0: LOCK L Not lock, 1: LOCK H Lock	
From	Displayed if effective in the error item →Refer to the error display list	Disc PSN (relative address) is displayed in case of access error
To	Displayed if effective in the error item →Refer to the error display list	Disc PSN (relative address) is displayed in case of access error

Error Display List:

Error display	Error description	Main causes of errors
DISC DETECT ERROR	Disc type error MIRR measured time is displayed in From:	Optical pick-up, RF amplifier or CD DSP IC is faulty
OFFSET ADJUST ERROR	Offset adjustment error	Optical pick-up, RF amplifier or CD DSP IC is faulty
FCS SRV ON ERROR	Focus servo error An error code is displayed in From:	From:1 means focus search failed From:2 means defocusing
CLV SRV ON ERROR	CLV servo error	Defocusing
E-F BALANCE ERROR	E-F balance adjustment error	Defocusing
TRK SRV ON ERROR	Tracking servo error	Tracking servo on time out Optical pick-up, RF amplifier or CD DSP IC is faulty
SLD SRV ON ERROR	Sled servo error	Sled servo on time out
FOCUS BIAS ERROR	Focus bias adjustment failed An error code is displayed in From:	Defocusing during adjustment Description of display An error code is displayed in From From:1 means retry failed 3 times From:2 means abnormal value Optical pick-up, RF amplifier or CD DSP IC is faulty
FCS AGC ERROR	Error at focus gain automatic adjustment	Defocusing during adjustment Optical pick-up, RF amplifier or CD DSP IC is faulty
TRK AGC ERROR	Error at tracking gain automatic adjustment	Defocusing during adjustment Optical pick-up, RF amplifier or CD DSP IC is faulty
ACCESS 1TJ ERROR	Access Error at one-track jump Effective addresses (PSN) are displayed in From: and To:	Access failed Defocusing at access, etc
ACCESS FINE ERROR	Access Error at fine search Effective addresses (PSN) are displayed in From: and To:	Access failed Defocusing at access, etc
ACCESS MOVE ERROR	Access Error at M-track MOVE Effective addresses (PSN) are displayed in From: and To:	Access failed Defocusing at access, etc
WHILE PLAYING ERROR	Error during disc playing	Defocusing Focusing retry failed
FCS JUMP ERROR	Time out error at focus jump	Defocusing Focusing retry failed

System errors are as follows.

Note: This error is not saved in the set.

Display	Description
Toc Error *	Error during the time from auto adjustment to TOC reading, Different type of disc (Such as a DVD disc), Disc is dirty
Toc Error ****	Illegal SACD (Such as a pirated version)
Read Error	Music data read error (Error during disc playing)

6-8. WAVEFORMS CHECK

This set performs automatic adjustment for each disc, and therefore the set need not be adjusted when parts are replaced, but it requires checking following the description in this section, 6-1. IC AND FLUORESCENT DISPLAY TUBE CHECK and 6-2. AUTO CHECK.
For the check, the test mode is used. Wrong setting causes a trouble, thus requiring extreme care.

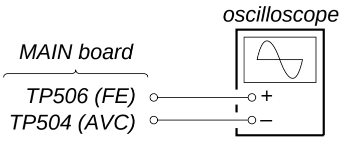
BU Electrical Adjustment Mode

The BU electrical adjustment mode is used to check the S curve waveform, traverse waveform and RF waveform. After a disc is placed on the tray, each time the |◁◁ AMS ▷▷| dial is pressed, the check mode is switched in order for S curve waveform→ traverse waveform→RF waveform.

Setting Method:
After setting the test mode, rotate the |◁◁AMS▷▷| dial to select “9C BU DENCHO” and press the |◁◁ AMS ▷▷| dial to enter. “BU MEASURE” will be displayed if the BU electrical adjustment mode becomes active.

S Curve Check

Connection:



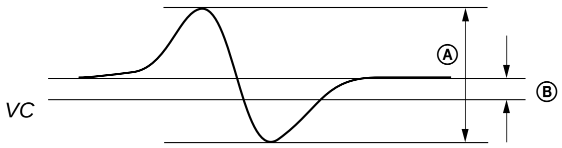
Checking Method:

1. After setting the BU electrical adjustment, place the test disc (PATD-012 or SATD-S4) on the tray and close the tray, then press the |◁◁ AMS ▷▷| dial.
2. At the completion of disc type check, “CD DETECT” will be displayed (for PATD-012 or YEDS-18).
   Note: For the SATD-S4, “SACD DETECT“ is displayed.
3. Press again the |◁◁AMS▷▷| dial, and the S curve waveform check mode will become active and “S-J1 MODE” will be displayed.
4. Connect an oscilloscope to the TP506 (FE) and TP504 (AVC) on the MAIN board.
5. Check that the level Ⓐ and Ⓑ of waveform on the oscilloscope satisfy the specification.

Specified Value:

Disc	Ⓐ	Ⓑ
SATD-04	0.7 to 1.7 Vp-p	- 0.1 to +0.1V
PATD-012 or YEDS-18		

S curve waveform

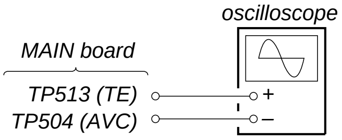


Note: For easier observation of this waveform, extend the sweep time and raise the brightness.

Checking and Connecting Location : See page 68.

Traverse Check

Connection:



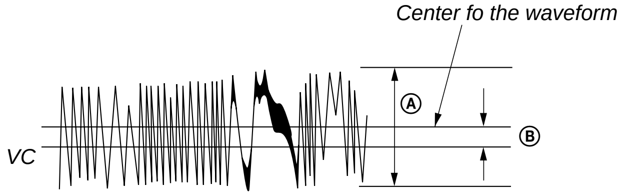
Checking Method:

1. Under the condition of S curve waveform check mode in step 5, press the |◁◁ AMS ▷▷| dial.
2. After “WAIT” is displayed, the traverse waveform check mode will become active and “TRAVERSE MODE” will be displayed.
3. Connect an oscilloscope to the TP513 (TE) and TP504 (AVC) on the MAIN board.
4. Check that the level Ⓐ and Ⓑ of waveform on the oscilloscope satisfy the specification.

Specified Value:

Disc	Ⓐ	Ⓑ
SATD-04	0.9 to 1.5 Vp-p	- 0.1 to +0.1V
PATD-012 or YEDS-18		

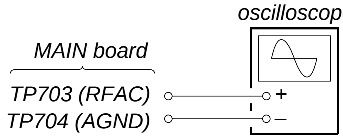
Traverse waveform



Checking and Connecting Location : See page 68.

RF Level Check

Connection:



Checking Method:

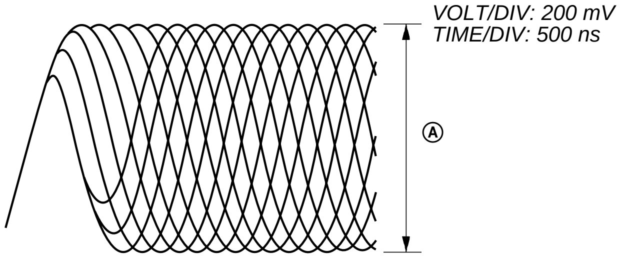
1. Under the condition of traverse waveform check mode in step 4, press the |◁◁ AMS ▷▷| dial.
2. Connect an oscilloscope to the TP703 (RFAC) and TP704 (AGND) on the MAIN board.
3. After “WAIT” is displayed, the RF waveform check mode will become active and “PLAY 5th” will be displayed, and the 5th music on the disc will be played.
4. Check that the RF waveform is clear and the level satisfies the specification.
5. Press the |◁◁AMS▷▷| dial, and “GAISHU” will be displayed and the outward track of the disc will be played.
6. Check that the RF waveform is clear and the level satisfies the specification.
7. Press the |◁◁AMS▷▷| dial, and “NAISHU” will be displayed and the inward track of the disc will be played.
8. Check that the RF waveform is clear and the level satisfies the specification.
9. After checking, press the |◁◁ AMS ▷▷| dial, and the test is over when “BU MEASURE” is displayed.
10. Press the OPEN/CLOSE button to open the tray, and remove the test disc.
11. Using each type of disc, repeat from step 1 of S curve waveform check up to step 10 of RF level check.
12. When the check is over, press the POWER button to turn the power off.

Note: Take care not to leave the test disc in the set.

Specified Value:

Disc	Ⓐ
SATD-S4	0.9 to 1.5 Vp-p
PATD-012 or YEDS-18	

RF signal waveform

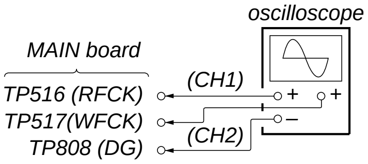


Note: Clear RF waveform refers to the waveform where ◊ shapes should be distinctively observed in the center.

Checking and Connecting Location : See page 68.

CLV Jitter Check (CD only)

Connection:



Checking Method:

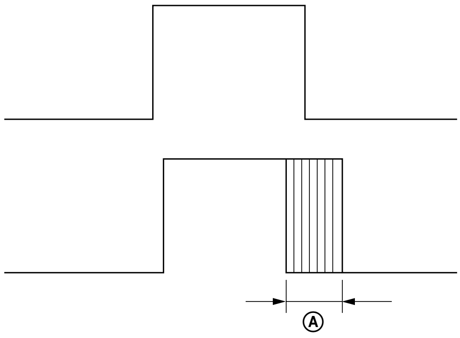
1. Set the test mode.
2. Connect an oscilloscope to the TP516 (RFCK) (CH1), TP517 (WFCK) (CH2) and TP808 (DG) (GND) on the MAIN board.
3. Place the test disc PATD-012 or YEDS-18 on the tray, and close the tray.
4. Rotate the |◁◁AMS▷▷| dial to select “61 DISC DETECT”, and press the |◁◁AMS▷▷| dial to enter. Then, the disc type will be judged.
5. Check that the disc type has been judged. (For the PATD-012, “DSKMOD CD” will be displayed. Refer to the test mode, DISC DETECT command (page 55))
6. Rotate the |◁◁ AMS ▷▷| dial to select “86 ALL SRV ON”, and press the |◁◁ AMS ▷▷| dial. Then, the disc will rotate, automatic adjustment will be carried out, and all servos will be turned on.
7. Rotate the |◁◁AMS▷▷| dial to select “07 DSP MON3”, and press the |◁◁ AMS ▷▷| dial to enter.
8. Check that the value Ⓐ of waveform on the oscilloscope satisfies the specification.
9. Rotate the |◁◁AMS▷▷| dial to select “19 ALL SRV OFF”, and press the |◁◁ AMS ▷▷| dial. Then, all servos will be turned off and the disc rotation will stop.
10. Press the OPEN/CLOSE button to open the tray, and remove the test disc.
11. Press the POWER button to turn the power off.

Note: Take care not to leave the test disc in the set.

Specified Value:

Disc	Ⓐ
PATD-012 or YEDS-18	50 µsec or less

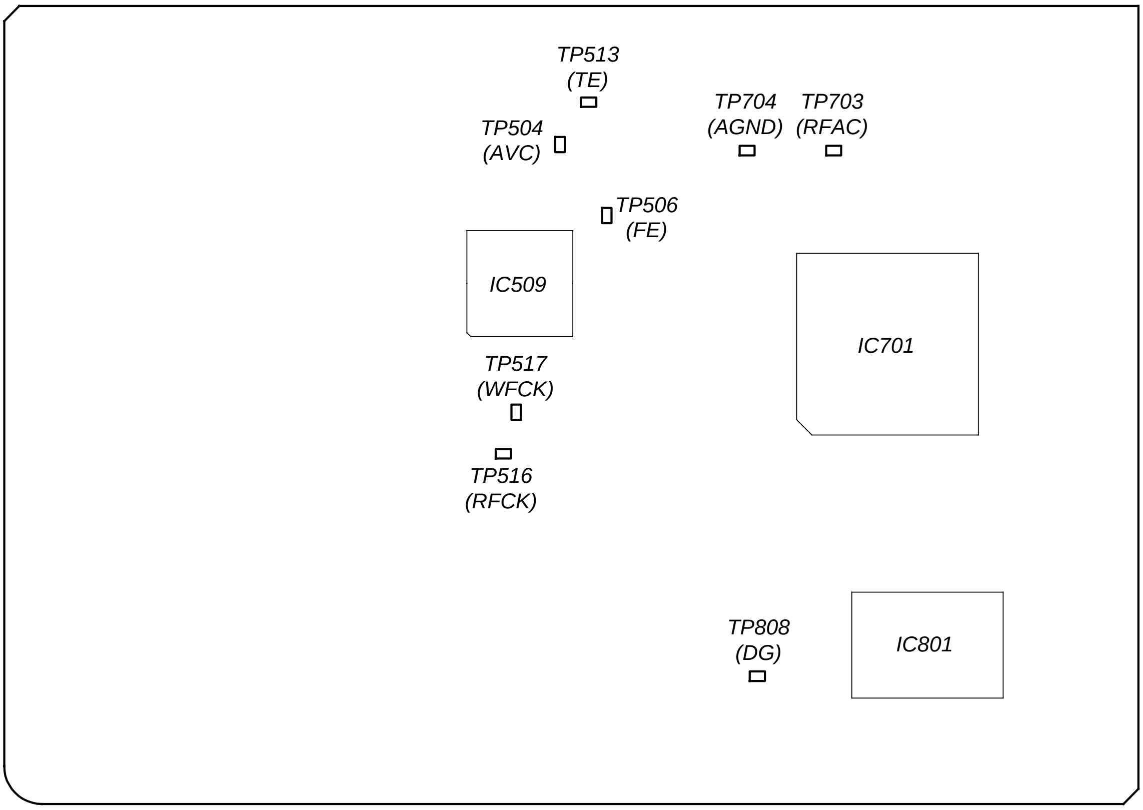
CLV jitter waveform



Checking and Connecting Location : See page 68.

Checking and Connecting Location:

– MAIN Board (Component Side) –


TP513
(TE)
TP504
(AVC)
TP704
(AGND)
TP703
(RFAC)
TP506
(FE)
IC509
IC701
TP517
(WFCK)
TP516
(RFCK)
TP808
(DG)
IC801

SECTION 7
EXPLODED VIEWS

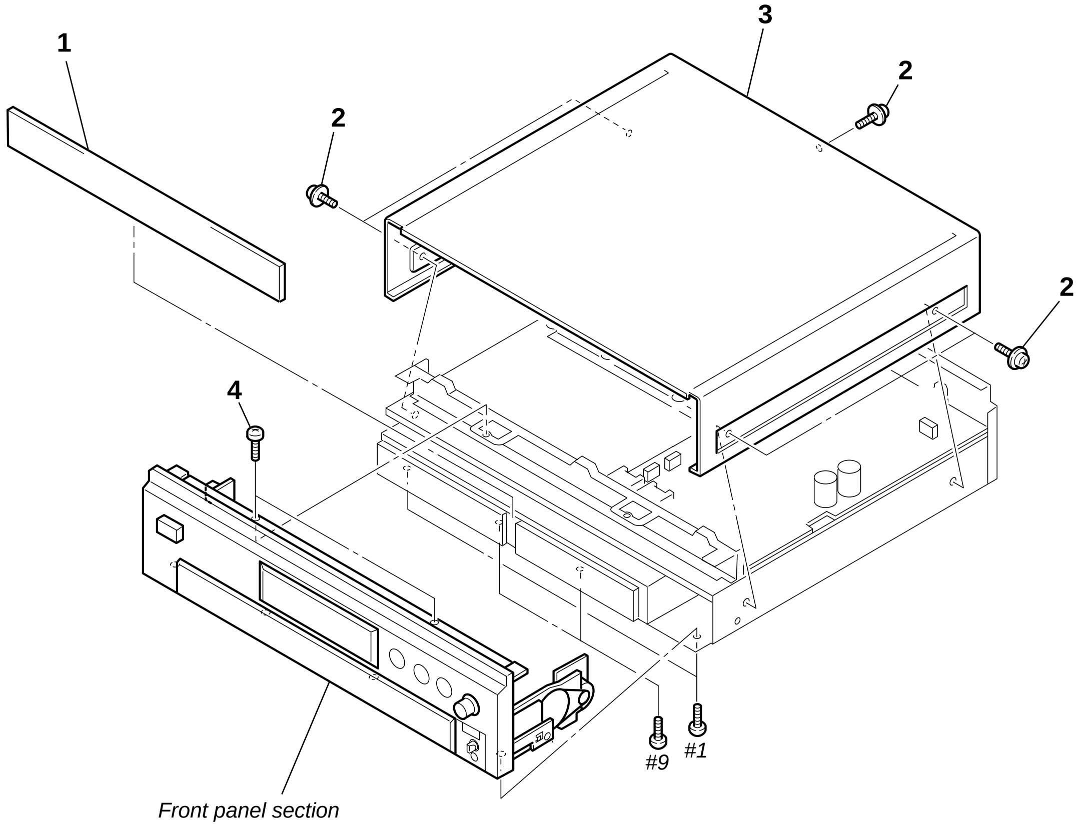
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

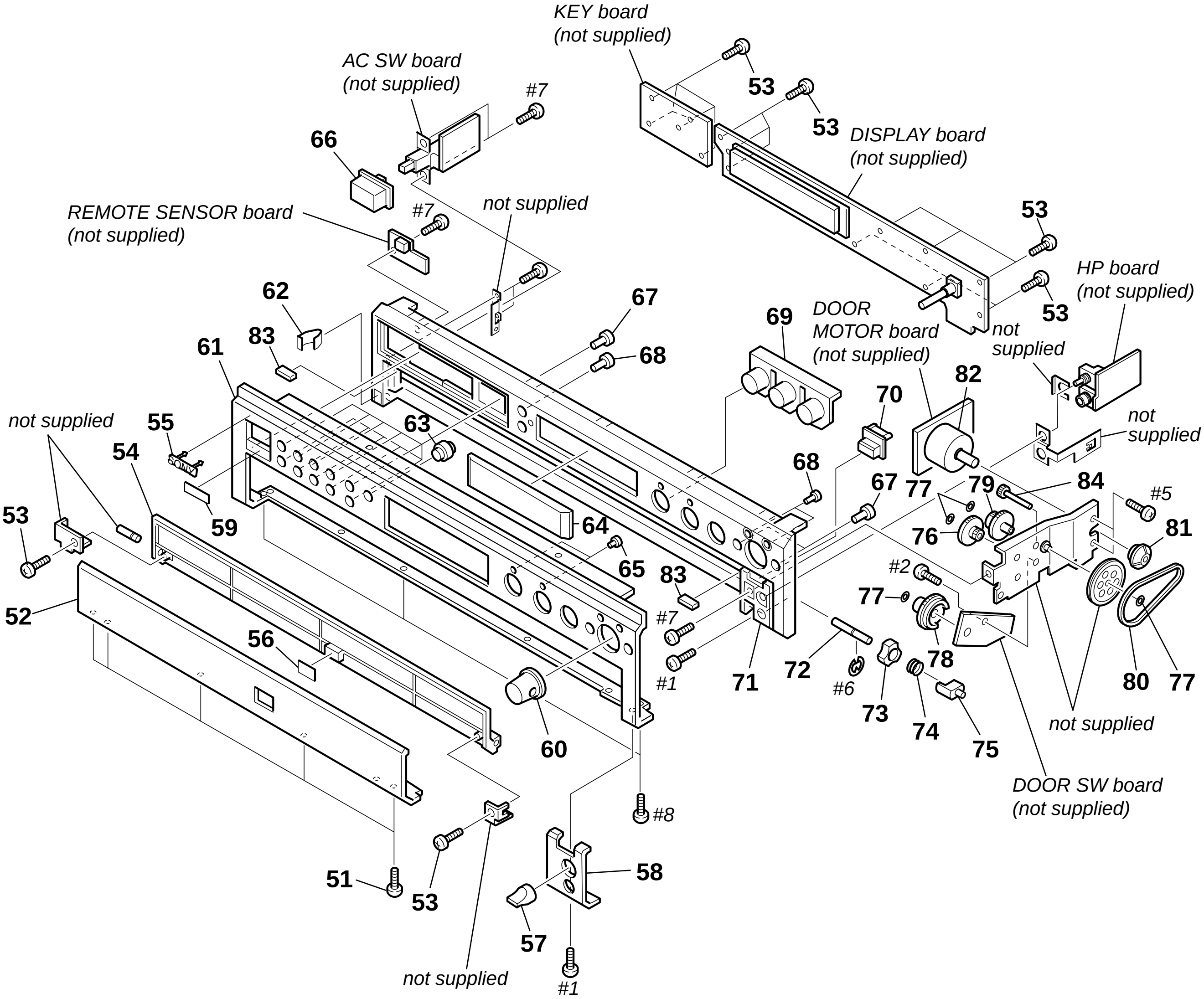
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. CASE SECTION



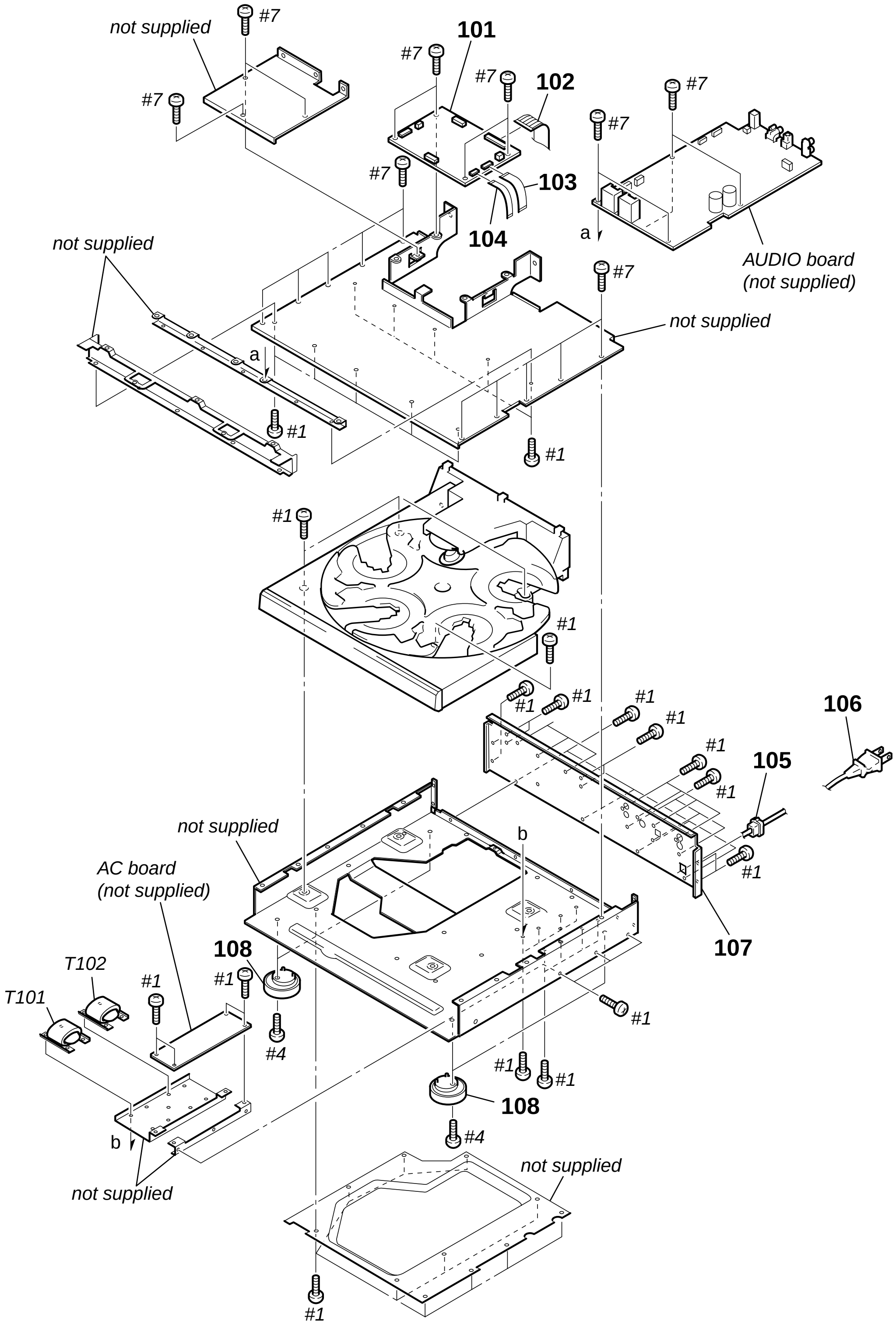
Ref. No.	Part No.	Description	Remarks
1	4-230-713-01	PANEL, LOADING	
2	4-227-843-01	SCREW (TP), FLAT HEAD	
3	4-230-684-01	CASE	
4	4-929-074-01	SCREW (3X8)	

7-2. FRONT PANEL SECTION


KEY board
(not supplied)
AC SW board
(not supplied)
#7
53
53
DISPLAY board
(not supplied)
66
REMOTE SENSOR board
(not supplied)
#7
not supplied
53
HP board
(not supplied)
53
62
67
69
DOOR
MOTOR board
(not supplied)
not
supplied
61
83
68
82
70
not supplied
55
63
not
supplied
54
68
67
77
79
84
#5
53
59
64
76
81
65
83
#2
52
#7
77
56
72
78
#1
71
#6
73
80
77
74
75
60
not supplied
DOOR SW board
(not supplied)
#8
58
51
53
57
not supplied
#1

Ref. No.	Part No.	Description	Remarks
51	4-929-074-01	SCREW (3X8)	
52	4-230-711-01	LID	
53	4-951-620-01	SCREW (2.6X8), +BVTP	
54	4-230-710-01	BASE, LID	
55	4-942-568-41	EMBLEM (NO.5), SONY	
56	4-230-714-01	EMBLEM (SACD)	
57	4-992-539-11	KNOB(PHONE LEVEL)	
58	4-230-720-01	ESCUTCHEON (H.P)	
59	4-230-636-11	PLATE (REMOTE), INDICATION	
60	4-230-637-11	KNOB (AMS)	
61	4-230-717-01	PANEL, FRONT	
62	4-230-709-01	SPRING (SHAFT L)	
63	4-220-711-01	INDICATOR (FILTER)	
64	4-230-721-01	WINDOW (FL)	
65	4-230-638-01	INDICATOR (BUTTON PLAY)	
66	4-923-520-01	KNOB, POWER	
67	4-220-319-11	BUTTON (MODE)	
68	4-220-317-01	BUTTON (FILTER)	
69	4-230-722-01	BUTTON (PLAY)	
70	4-230-723-01	BUTTON (OPEN/CLOSE)	
71	4-230-718-01	BASE, PANEL	
72	4-230-703-01	SHAFT (LIMITTER)	
73	4-230-701-01	GEAR (LIMITTER)	
74	4-230-704-01	SPRING (LIMITTER)	
75	4-230-702-01	LIMITTER	
76	4-230-699-01	GEAR (C)	
77	4-926-218-01	RING (DIA.2), RETAINING	
78	4-230-700-01	GEAR (D)	
79	4-230-698-01	GEAR (B)	
80	4-230-712-01	BELT (DIA. 58)	
81	4-955-234-03	PULLEY (MOTOR CDM)	
82	1-541-632-11	MOTOR, DC (DOOR)	
83	4-230-733-01	CUSHION (STOPPER)	
84	X-4953-199-1	PULLEY (GEAR A) ASSY	

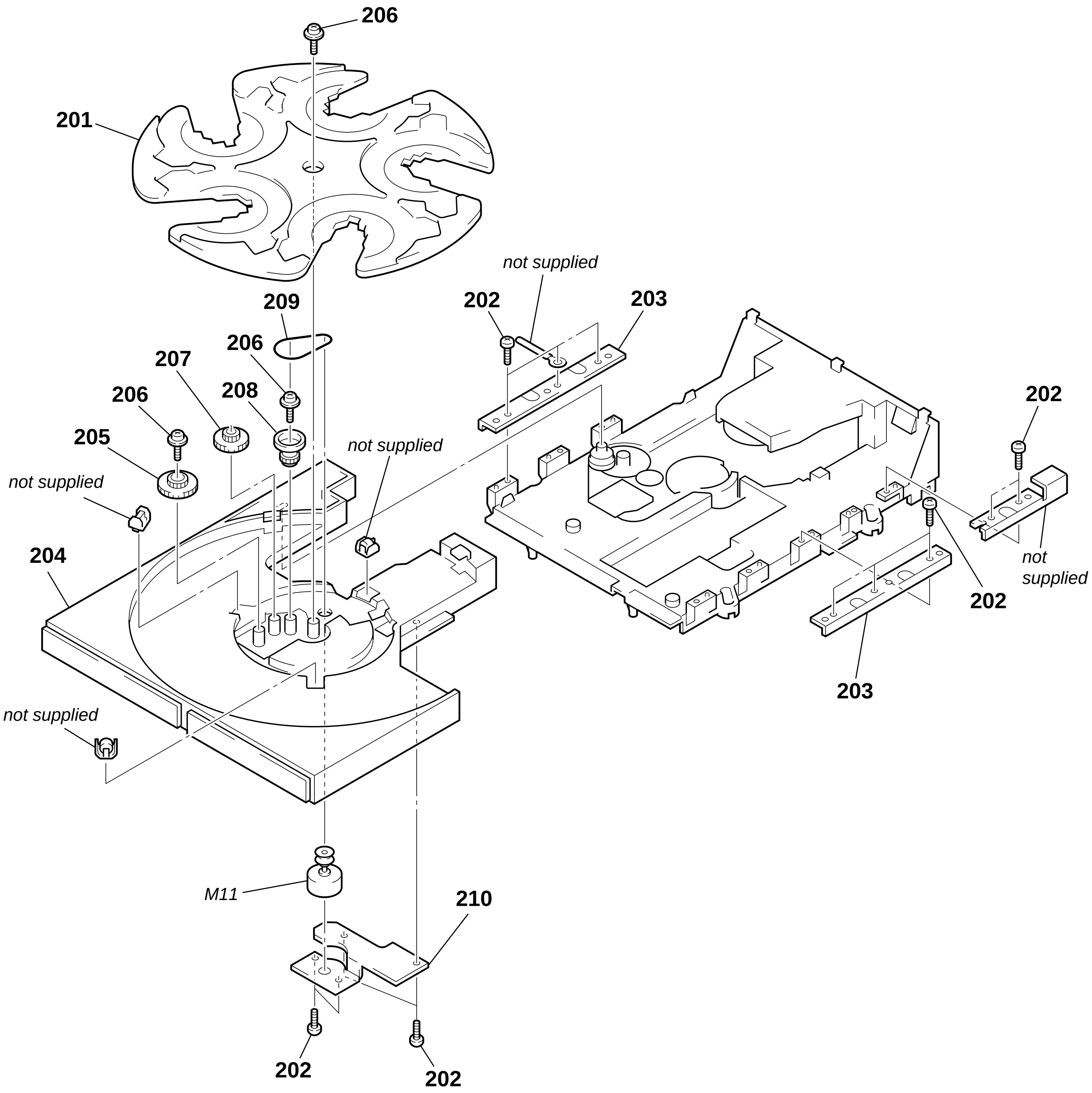
7-3. MAIN CHASSIS SECTION


not supplied
#7
101
#7
#7
102
#7
#7
#7
#7
103
104
a
AUDIO board
(not supplied)
#7
not supplied
not supplied
a
#1
#1
#1
#1
#1
#1
#1
#1
#1
#1
106
105
#1
not supplied
b
AC board
(not supplied)
107
T102
108
#1
#1
T101
#4
#1
#1
#1
108
#4
b
not supplied
not supplied
#1

Ref. No.	Part No.	Description	Remarks
101	A-4725-364-A	MAIN BOARD, COMPLETE	
102	1-757-135-11	WIRE (FLAT TYPE) (35 CORE)	
103	1-757-136-11	WIRE (FLAT TYPE) (16 CORE)	
104	1-757-137-11	WIRE (FLAT TYPE) (9 CORE)	
105	4-966-267-12	BUSHING (FBS001), CORD	
⚠106	1-783-531-31	CORD, POWER	
107	4-230-686-01	PANEL, BACK	
108	X-4945-356-3	FOOT ASSY (F50180S)	
⚠T101	1-435-732-11	TRANSFORMER, POWER	
⚠T102	1-435-733-11	TRANSFORMER, POWER	

Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

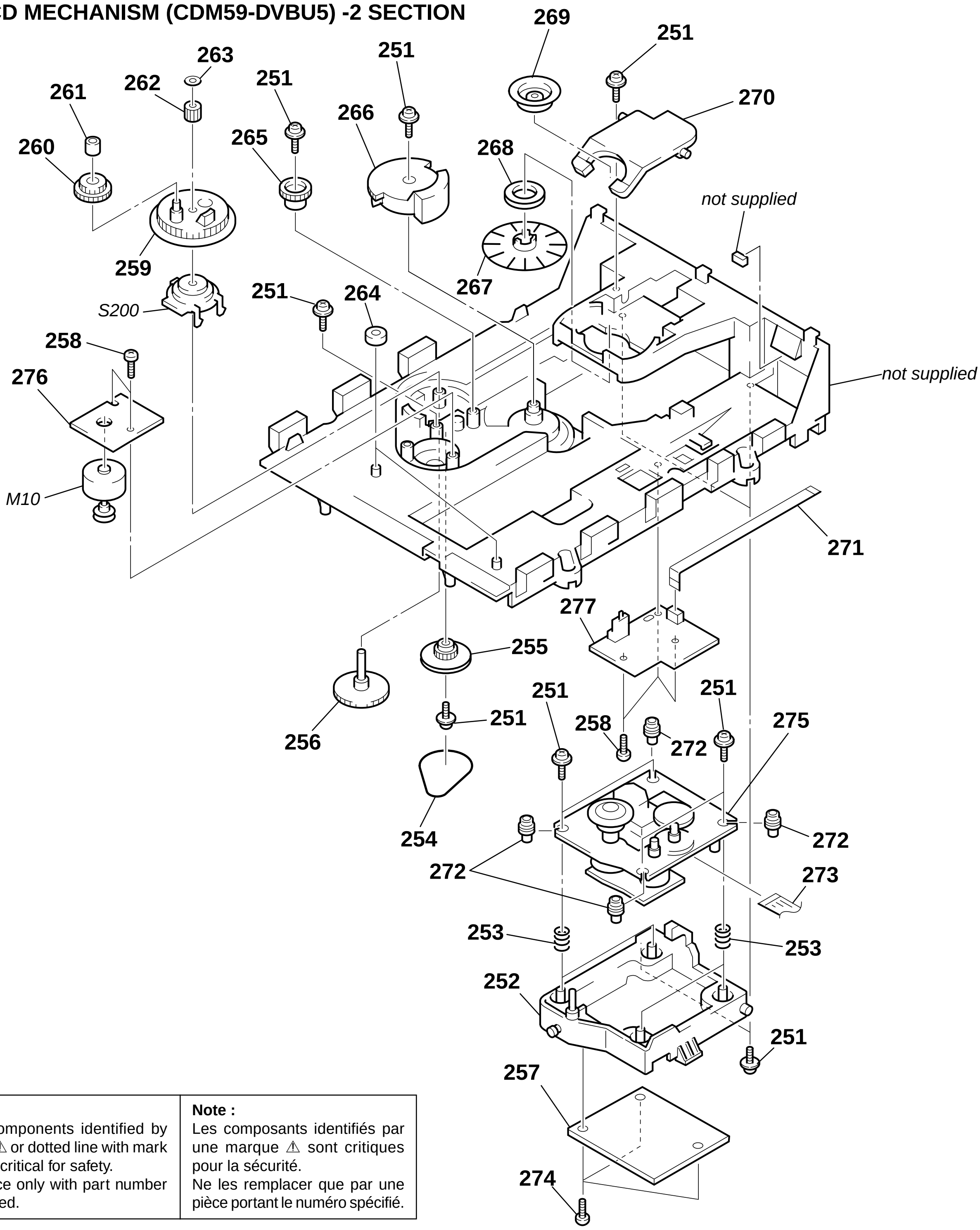
7-4. CD MECHANISM (CDM59-DVBU5) -1 SECTION


206
201
not supplied
209
202
203
206
207
206
208
205
not supplied
not supplied
202
204
not supplied
not supplied
202
203
M11
210
202
202

Ref. No.	Part No.	Description	Remarks
201	4-224-603-01	TRAY	
202	4-218-253-01	SCREW (M2.6), +BTTP	
203	4-224-619-01	BRACKET (GUIDE)	
204	4-224-602-01	TABLE	
205	4-224-617-01	GEAR (RM-E)	
206	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	

Ref. No.	Part No.	Description	Remarks
207	4-224-616-01	GEAR (RM-M)	
208	4-224-615-01	GEAR (RM-B)	
209	4-225-328-01	BELT (ROTARY)	
210	1-676-245-11	SENSOR BOARD	
M11	A-4672-867-A	MOTOR ASSY, ROTARY (TRAY)	

7-5. CD MECHANISM (CDM59-DVBU5) -2 SECTION


269
251
263
251
261
262
251
270
266
260
265
268
not supplied
259
251
264
267
S200
258
276
not supplied
M10
271
277
255
256
251
251
251
258
272
275
254
272
272
273
253
253
252
251
257
274

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note :** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks
251	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
252	4-229-955-04	HOLDER (BU)	
253	4-231-449-01	SPRING (230), CONE TYPE COIL	
254	4-225-885-01	BELT (LOADING)	
255	4-225-844-01	GEAR (LOADING A)	
256	4-224-613-01	GEAR (SHAFT)	
257	A-4725-382-A	RF BOARD, COMPLETE	
258	4-218-253-01	SCREW (M2.6), +BTTP	
259	4-224-607-01	GEAR, SWING	
260	4-224-609-01	GEAR (LOADING C)	
261	4-224-608-01	COLLAR, SWING	
262	4-224-611-01	GEAR (LOADING B)	
263	3-016-533-21	WASHER (FR), STOPPER	
* 264	4-951-619-21	CUSHION (A)	
265	4-224-606-01	GEAR (RV)	
266	4-224-605-01	GEAR (U/D)	
267	X-4953-250-1	PLATE (A) ASSY, CHUCKING	
268	3-061-886-01	YOKE	
269	4-229-957-01	PLATE (B), CHUCKING	
270	4-224-618-01	LEVER (LIFTER)	
271	1-791-930-11	WIRE (FLAT TYPE) (6 CORE)	
272	4-227-549-11	INSULATOR	
273	1-757-097-11	WIRE (FLAT TYPE) (25 CORE)	
274	4-951-620-01	SCREW (2.6X8), +BVTP	
⚠275	8-820-132-02	OPTICAL PICK-UP KHM-230AAA/J1NP	
276	1-676-244-11	LOADING MOTOR BOARD	
277	1-676-246-11	JUNCTION BOARD	
M10	A-4672-879-A	MOTOR ASSY, LOADING	
S200	1-418-746-11	ENCODER, ROTARY	

SECTION 8
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  CND : Canadian model
- CAPACITORS:
  uF: μF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: μH
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA... , uPA... , μPA... ,
  uPB... , μPB... , uPC... , μPC... ,
  uPD..., μPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
		AC BOARD			
		********			
		< CAPACITOR >			
⚠C1031	1-113-927-11	CERAMIC	10000PF	20.00%	250V
⚠C1032	1-113-927-11	CERAMIC	10000PF	20.00%	250V
⚠C1033	1-127-780-51	CERAMIC	220PF	10.00%	250V
⚠C1035	1-127-780-51	CERAMIC	220PF	10.00%	250V
⚠C1036	1-127-780-51	CERAMIC	220PF	10.00%	250V
		< CONNECTOR >			
* CN1011	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
CN1012	1-564-321-00	PIN, CONNECTOR 2P			
* CN1013	1-564-321-21	PIN, CONNECTOR 2P			
CN1014	1-564-321-00	PIN, CONNECTOR 2P			
		< COIL >			
⚠L991	1-424-485-11	FILTER, LINE			
**					
		AC SW BOARD			
		***********			
		< CAPACITOR >			
⚠C1030	1-113-927-11	CERAMIC	10000PF	20.00%	250V
		< CONNECTOR >			
CN1010	1-564-321-00	PIN, CONNECTOR 2P			
		< SWITCH >			
⚠S1025	1-572-267-51	SWITCH, PUSH (AC POWER)(1 KEY)(POWER)			
**					
		AUDIO BOARD			
		**********			
*	3-309-144-21	HEATSINK			
	4-211-300-01	RING,RUBBER			
	7-685-646-79	SCREW+BVTP 3X8 TYPE2 N-S			
	7-685-872-09	SCREW+BVTT 3X8 (S)			
		< CAPACITOR >			
C100	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C101	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C102	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C103	1-128-654-21	FILM	2200PF	5%	50V
C105	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V

Ref. No.	Part No.	Description			Remarks
C106	1-109-857-11	ELECT	47uF	20.00%	63V
C107	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C108	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C109	1-130-955-00	FILM	0.01uF	5.00%	100V
C110	1-130-955-00	FILM	0.01uF	5.00%	100V
C111	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C114	1-130-309-00	FILM	0.033uF	5.00%	100V
C117	1-130-973-00	FILM	0.022uF	3.00%	100V
C118	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C119	1-136-235-91	FILM	0.0091uF	3.00%	100V
C120	1-130-973-00	FILM	0.022uF	3.00%	100V
C121	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C122	1-136-235-91	FILM	0.0091uF	3.00%	100V
C123	1-136-252-00	FILM	0.0015uF	5.00%	100V
C124	1-136-252-00	FILM	0.0015uF	5.00%	100V
C125	1-136-818-11	FILM	0.0047uF	5.00%	100V
C126	1-136-810-11	FILM	220PF	5.00%	100V
C127	1-127-713-21	FILM	10000PF	5%	50V
C128	1-127-741-21	ELECT	0.047uF	10%	250V
C129	1-128-201-11	ELECT	100uF	20.00%	63V
C130	1-109-857-11	ELECT	47uF	20.00%	63V
C131	1-109-857-11	ELECT	47uF	20.00%	63V
C132	1-109-857-11	ELECT	47uF	20.00%	63V
C133	1-109-857-11	ELECT	47uF	20.00%	63V
C138	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C139	1-124-927-11	ELECT	4.7uF	20%	100V
C140	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C141	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C200	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C201	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C202	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C204	1-128-654-21	FILM	2200PF	5%	50V
C205	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C206	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C207	1-109-857-11	ELECT	47uF	20.00%	63V
C208	1-130-955-00	FILM	0.01uF	5.00%	100V
C209	1-130-955-00	FILM	0.01uF	5.00%	100V
C211	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C212	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C216	1-130-309-00	FILM	0.033uF	5.00%	100V
C217	1-130-973-00	FILM	0.022uF	3.00%	100V
C218	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C219	1-136-235-91	FILM	0.0091uF	3.00%	100V
C220	1-130-973-00	FILM	0.022uF	3.00%	100V
C221	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V

Ref. No.	Part No.	Description			Remarks
C222	1-136-235-91	FILM	0.0091uF	3.00%	100V
C223	1-136-252-00	FILM	0.0015uF	5.00%	100V
C224	1-136-252-00	FILM	0.0015uF	5.00%	100V
C225	1-136-818-11	FILM	0.0047uF	5.00%	100V
C226	1-136-810-11	FILM	220PF	5.00%	100V
C227	1-127-713-21	FILM	10000PF	5%	50V
C228	1-127-741-21	ELECT	0.047uF	10%	250V
C229	1-128-201-11	ELECT	100uF	20.00%	63V
C230	1-109-857-11	ELECT	47uF	20.00%	63V
C231	1-109-857-11	ELECT	47uF	20.00%	63V
C232	1-109-857-11	ELECT	47uF	20.00%	63V
C233	1-109-857-11	ELECT	47uF	20.00%	63V
C238	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C239	1-124-927-11	ELECT	4.7uF	20%	100V
C240	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C241	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C300	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C302	1-135-671-11	ELECT	2200uF		10V
C303	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C304	1-135-671-11	ELECT	2200uF		10V
C305	1-135-658-11	ELECT	3300uF		6.3V
C306	1-164-346-11	CERAMIC CHIP	1uF		16V
C307	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C308	1-135-671-11	ELECT	2200uF		10V
C309	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C310	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C311	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C312	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C313	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C314	1-135-658-11	ELECT	3300uF		6.3V
C315	1-135-658-11	ELECT	3300uF		6.3V
C316	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C317	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C318	1-117-775-31	ELECT	0.1uF	10.00%	250V
C319	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C320	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C321	1-135-671-11	ELECT	2200uF		10V
C322	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C323	1-135-671-11	ELECT	2200uF		10V
C324	1-135-695-11	ELECT	3300uF		16V
C325	1-102-942-00	CERAMIC	5.0PF	±0.5PF	50V
C326	1-102-951-00	CERAMIC	15PF	5%	50V
C327	1-128-201-11	ELECT	100uF	20.00%	63V
C328	1-128-201-11	ELECT	100uF	20.00%	63V
C329	1-109-857-11	ELECT	47uF	20.00%	63V
C330	1-128-201-11	ELECT	100uF	20.00%	63V
C331	1-128-201-11	ELECT	100uF	20.00%	63V
C332	1-128-201-11	ELECT	100uF	20.00%	63V
C333	1-109-857-11	ELECT	47uF	20.00%	63V
C334	1-109-857-11	ELECT	47uF	20.00%	63V
C335	1-128-201-11	ELECT	100uF	20.00%	63V
C336	1-119-801-21	ELECT	220uF	20.00%	16V
C337	1-119-801-21	ELECT	220uF	20.00%	16V
C338	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C339	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C340	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C341	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C342	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C344	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C345	1-124-927-11	ELECT	4.7uF	20%	100V
C346	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C347	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C348	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C349	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C350	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C351	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C352	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C353	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C354	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C355	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C356	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C357	1-125-859-21	FILM	0.001uF	5.00%	50V
C360	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C361	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C362	1-135-669-11	ELECT	470uF		10V
C370	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C371	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C372	1-135-669-11	ELECT	470uF		10V
C381	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C385	1-126-964-11	ELECT	10uF	20.00%	50V
C386	1-126-964-11	ELECT	10uF	20.00%	50V
C387	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C388	1-164-346-11	CERAMIC CHIP	1uF		16V
C389	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C402	1-128-562-11	ELECT	47uF	20.00%	100V
C404	1-128-562-11	ELECT	47uF	20.00%	100V
C405	1-136-820-11	FILM	0.01uF	5.00%	100V
C406	1-136-818-11	FILM	0.0047uF	5.00%	100V
C407	1-136-820-11	FILM	0.01uF	5.00%	100V
C408	1-135-698-11	ELECT	10000uF		16V
C409	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C410	1-135-748-11	ELECT	4700uF		35V
C411	1-135-748-11	ELECT	4700uF		35V
C413	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C414	1-135-698-11	ELECT	10000uF		16V
C415	1-136-820-11	FILM	0.01uF	5.00%	100V
C416	1-136-820-11	FILM	0.01uF	5.00%	100V
C417	1-135-696-11	ELECT	4700uF		16V
C419	1-135-696-11	ELECT	4700uF		16V
C420	1-124-927-11	ELECT	4.7uF	20%	100V
C421	1-135-696-11	ELECT	4700uF		16V
C422	1-135-697-11	ELECT	6800uF		16V
C423	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C424	1-136-820-11	FILM	0.01uF	5.00%	100V
C425	1-136-820-11	FILM	0.01uF	5.00%	100V
C426	1-128-204-11	ELECT	470uF	20.00%	63V
C427	1-128-204-11	ELECT	470uF	20.00%	63V
C428	1-109-857-11	ELECT	47uF	20.00%	63V
C429	1-109-857-11	ELECT	47uF	20.00%	63V
C430	1-119-815-21	ELECT	2200uF	20.00%	35V
C431	1-119-815-21	ELECT	2200uF	20.00%	35V
C432	1-128-204-11	ELECT	470uF	20.00%	63V
C433	1-128-204-11	ELECT	470uF	20.00%	63V
C435	1-136-820-11	FILM	0.01uF	5.00%	100V
C436	1-136-820-11	FILM	0.01uF	5.00%	100V
C438	1-124-927-11	ELECT	4.7uF	20%	100V
C442	1-126-964-11	ELECT	10uF	20.00%	50V
C443	1-126-964-11	ELECT	10uF	20.00%	50V
C444	1-126-965-11	ELECT	22uF	20.00%	50V
C445	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V

AUDIO

Ref. No.	Part No.	Description	Remarks
C446	1-164-695-11	CERAMIC CHIP 0.0022uF 5.00%	50V
C447	1-164-695-11	CERAMIC CHIP 0.0022uF 5.00%	50V
C448	1-164-695-11	CERAMIC CHIP 0.0022uF 5.00%	50V
		< CONNECTOR >	
CN300	1-770-640-11	CONNECTOR, FFC/FPC 9P	
CN301	1-770-646-11	CONNECTOR, FFC/FPC 16P	
CN302	1-506-468-11	PIN, CONNECTOR 3P	
CN303	1-506-468-11	PIN, CONNECTOR 3P	
CN400	1-691-768-11	PLUG (MICRO CONNECTOR) 6P	
CN401	1-691-766-41	PLUG (MICRO CONNECTOR) 4P	
CN403	1-691-765-31	PLUG (MICRO CONNECTOR) 3P	
* CN404	1-568-954-11	PIN, CONNECTOR 5P	
CN405	1-568-955-11	PIN, CONNECTOR 6P	
CN406	1-506-468-11	PIN, CONNECTOR 3P	
		< DIODE >	
D300	8-719-210-39	DIODE EC10QS04-TE12L5	
D301	8-719-210-39	DIODE EC10QS04-TE12L5	
D302	8-719-210-39	DIODE EC10QS04-TE12L5	
D303	8-719-210-39	DIODE EC10QS04-TE12L5	
D305	8-719-210-39	DIODE EC10QS04-TE12L5	
D306	8-719-210-39	DIODE EC10QS04-TE12L5	
D307	8-719-210-39	DIODE EC10QS04-TE12L5	
D350	8-719-977-28	DIODE UDZ-TE-17-10B	
D351	8-719-016-74	DIODE 1SS352-TPH3	
D352	8-719-016-74	DIODE 1SS352-TPH3	
D381	8-719-016-74	DIODE 1SS352-TPH3	
D400	8-719-973-02	DIODE RLZ-J8.2B-TE11	
D401	8-719-420-70	DIODE MA3360-H-TX	
D402	8-719-210-33	DIODE EC10DS2TE12L	
D403	8-719-210-33	DIODE EC10DS2TE12L	
D404	8-719-210-33	DIODE EC10DS2TE12L	
D405	8-719-210-33	DIODE EC10DS2TE12L	
D406	8-719-210-33	DIODE EC10DS2TE12L	
D407	8-719-210-33	DIODE EC10DS2TE12L	
D408	8-719-210-33	DIODE EC10DS2TE12L	
D409	8-719-210-33	DIODE EC10DS2TE12L	
D410	8-719-210-39	DIODE EC10QS04-TE12L5	
D411	8-719-210-39	DIODE EC10QS04-TE12L5	
D412	8-719-210-39	DIODE EC10QS04-TE12L5	
D413	8-719-210-39	DIODE EC10QS04-TE12L5	
D414	8-719-210-39	DIODE EC10QS04-TE12L5	
D415	8-719-210-39	DIODE EC10QS04-TE12L5	
D416	8-719-210-39	DIODE EC10QS04-TE12L5	
D417	8-719-210-39	DIODE EC10QS04-TE12L5	
D418	8-719-210-39	DIODE EC10QS04-TE12L5	
D419	8-719-210-39	DIODE EC10QS04-TE12L5	
D422	8-719-210-39	DIODE EC10QS04-TE12L5	
D423	8-719-210-39	DIODE EC10QS04-TE12L5	
D424	8-719-210-39	DIODE EC10QS04-TE12L5	
D425	8-719-210-39	DIODE EC10QS04-TE12L5	
D426	8-719-210-39	DIODE EC10QS04-TE12L5	
D427	8-719-210-39	DIODE EC10QS04-TE12L5	
D428	8-719-210-39	DIODE EC10QS04-TE12L5	
D432	8-719-820-05	DIODE 1SS181-TE85L	
D433	8-719-801-78	DIODE 1SS184-TE85L	
D434	8-719-158-49	DIODE UDZ-TE-17-12B	

Ref. No.	Part No.	Description	Remarks
		< IC >	
IC100	8-759-371-51	IC CXA8042AS	
IC101	8-759-566-39	IC OPA2132UA/2K5	
IC102	8-759-566-39	IC OPA2132UA/2K5	
IC200	8-759-371-51	IC CXA8042AS	
IC201	8-759-566-39	IC OPA2132UA/2K5	
IC202	8-759-566-39	IC OPA2132UA/2K5	
IC300	8-759-447-77	IC TC7WH74FU(TE12R)	
IC301	8-759-678-29	IC CXD9556AQ	
IC302	8-759-591-61	IC TC7WHU04FU(TE12R)	
IC303	8-759-445-59	IC BA033T	
IC304	8-759-231-53	IC M5F7805L	
IC305	8-759-604-90	IC M5F7907L	
IC306	8-759-231-53	IC M5F7805L	
IC307	8-759-711-85	IC NJM4580E-D(T1)	
IC385	8-749-012-69	IC GP1F38T (OPTICAL OUT)	
IC400	8-759-394-35	IC BA12T	
IC401	8-759-445-59	IC BA033T	
IC402	8-759-450-47	IC BA05T	
IC403	8-759-231-53	IC M5F7805L	
IC404	8-759-245-86	IC M5F7912L	
IC405	8-759-231-58	IC M5F7812L	
		< JACK >	
J301	1-785-868-21	JACK, PIN 2P (ANALOG)	
J381	1-779-655-21	JACK (SMALL TYPE) (2 GANG) (CONTROL A1II)	
J385	1-770-905-21	JACK, PIN 1P (COAXIAL OUT)	
		< COIL >	
L306	1-414-553-11	FERRITE 0uH	
L307	1-410-757-21	INDUCTOR 0.33MH	
L308	1-410-757-21	INDUCTOR 0.33MH	
L309	1-410-757-21	INDUCTOR 0.33MH	
L310	1-410-757-21	INDUCTOR 0.33MH	
L311	1-410-757-21	INDUCTOR 0.33MH	
L312	1-410-757-21	INDUCTOR 0.33MH	
L313	1-410-757-21	INDUCTOR 0.33MH	
L314	1-410-757-21	INDUCTOR 0.33MH	
L315	1-412-004-31	INDUCTOR 6.8uH	
L316	1-410-993-42	INDUCTOR 1uH	
L360	1-410-757-21	INDUCTOR 0.33MH	
L361	1-412-004-31	INDUCTOR 6.8uH	
L370	1-410-757-21	INDUCTOR 0.33MH	
L371	1-412-004-31	INDUCTOR 6.8uH	
L381	1-216-295-11	SHORT 0	
L385	1-414-553-11	FERRITE 0uH	
L386	1-414-553-11	FERRITE 0uH	
L400	1-424-090-11	COIL, LINE FILTER	
L401	1-424-090-11	COIL, LINE FILTER	
L402	1-424-090-11	COIL, LINE FILTER	
L403	1-424-090-11	COIL, LINE FILTER	
L404	1-424-090-11	COIL, LINE FILTER	
L405	1-424-090-11	COIL, LINE FILTER	
L406	1-424-090-11	COIL, LINE FILTER	
L407	1-424-090-11	COIL, LINE FILTER	
L408	1-424-090-11	COIL, LINE FILTER	
L409	1-410-482-31	INDUCTOR 100uH	
L410	1-410-482-31	INDUCTOR 100uH	

Ref. No.	Part No.	Description			Remarks
		< TRANSISTOR >			
Q100	8-729-202-05	TRANSISTOR	2SC2873O-TE12L		
Q101	8-729-202-05	TRANSISTOR	2SC2873O-TE12L		
Q200	8-729-202-05	TRANSISTOR	2SC2873O-TE12L		
Q201	8-729-202-05	TRANSISTOR	2SC2873O-TE12L		
Q350	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q351	8-729-207-71	TRANSISTOR	RN2405-TE85L		
Q352	8-729-027-38	TRANSISTOR	DTA144EKA-T146		
Q360	8-729-141-74	TRANSISTOR	2SC3624A-T2L15L16		
Q370	8-729-141-74	TRANSISTOR	2SC3624A-T2L15L16		
Q372	8-729-120-28	TRANSISTOR	2SC1623-T1-L5L6		
Q381	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q401	8-729-209-71	TRANSISTOR	2SA1213O-TE12L		
		< RESISTOR >			
R100	1-216-037-00	METAL CHIP	330	5%	1/10W
R101	1-216-037-00	METAL CHIP	330	5%	1/10W
R102	1-216-037-00	METAL CHIP	330	5%	1/10W
R103	1-216-037-00	METAL CHIP	330	5%	1/10W
R104	1-259-919-11	CARBON MELF	510	2%	1/8W
R105	1-259-927-11	CARBON MELF	2.4K	2%	1/8W
R108	1-259-974-11	CARBON MELF	18	2%	1/8W
R109	1-259-990-11	CARBON MELF	390	2%	1/8W
R110	1-259-971-11	CARBON MELF	10	2%	1/8W
R111	1-259-971-11	CARBON MELF	10	2%	1/8W
R112	1-259-974-11	CARBON MELF	18	2%	1/8W
R113	1-259-990-11	CARBON MELF	390	2%	1/8W
R114	1-259-971-11	CARBON MELF	10	2%	1/8W
R115	1-259-971-11	CARBON MELF	10	2%	1/8W
R116	1-259-999-11	CARBON MELF	2.2K	2%	1/8W
R117	1-259-999-11	CARBON MELF	2.2K	2%	1/8W
R118	1-259-999-11	CARBON MELF	2.2K	2%	1/8W
R119	1-259-999-11	CARBON MELF	2.2K	2%	1/8W
R120	1-260-002-11	CARBON MELF	3.3K	2%	1/8W
R121	1-260-002-11	CARBON MELF	3.3K	2%	1/8W
R122	1-260-002-11	CARBON MELF	3.3K	2%	1/8W
R123	1-259-971-11	CARBON MELF	10	2%	1/8W
R124	1-259-971-11	CARBON MELF	10	2%	1/8W
R200	1-216-037-00	METAL CHIP	330	5%	1/10W
R201	1-216-037-00	METAL CHIP	330	5%	1/10W
R202	1-216-037-00	METAL CHIP	330	5%	1/10W
R203	1-216-037-00	METAL CHIP	330	5%	1/10W
R204	1-259-919-11	CARBON MELF	510	2%	1/8W
R205	1-259-927-11	CARBON MELF	2.4K	2%	1/8W
R208	1-259-974-11	CARBON MELF	18	2%	1/8W
R209	1-259-990-11	CARBON MELF	390	2%	1/8W
R210	1-259-971-11	CARBON MELF	10	2%	1/8W
R211	1-259-971-11	CARBON MELF	10	2%	1/8W
R212	1-259-974-11	CARBON MELF	18	2%	1/8W
R213	1-259-990-11	CARBON MELF	390	2%	1/8W
R214	1-259-971-11	CARBON MELF	10	2%	1/8W
R215	1-259-971-11	CARBON MELF	10	2%	1/8W
R216	1-259-999-11	CARBON MELF	2.2K	2%	1/8W
R217	1-259-999-11	CARBON MELF	2.2K	2%	1/8W
R218	1-259-999-11	CARBON MELF	2.2K	2%	1/8W
R219	1-259-999-11	CARBON MELF	2.2K	2%	1/8W
R220	1-260-002-11	CARBON MELF	3.3K	2%	1/8W
R221	1-260-002-11	CARBON MELF	3.3K	2%	1/8W
R222	1-260-002-11	CARBON MELF	3.3K	2%	1/8W
R223	1-259-971-11	CARBON MELF	10	2%	1/8W
R224	1-259-971-11	CARBON MELF	10	2%	1/8W
R303	1-216-019-00	METAL CHIP	56	5%	1/10W
R304	1-216-073-00	METAL CHIP	10K	5%	1/10W
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W
R306	1-216-033-00	METAL CHIP	220	5%	1/10W
R307	1-216-073-00	METAL CHIP	10K	5%	1/10W
R308	1-216-033-00	METAL CHIP	220	5%	1/10W
R309	1-216-041-00	METAL CHIP	470	5%	1/10W
R310	1-260-032-11	CARBON MELF	1M	2%	1/8W
R312	1-259-979-11	CARBON MELF	47	2%	1/8W
R313	1-259-990-11	CARBON MELF	390	2%	1/8W
R314	1-259-990-11	CARBON MELF	390	2%	1/8W
R315	1-216-041-00	METAL CHIP	470	5%	1/10W
R316	1-216-041-00	METAL CHIP	470	5%	1/10W
R317	1-216-041-00	METAL CHIP	470	5%	1/10W
R318	1-216-041-00	METAL CHIP	470	5%	1/10W
R319	1-216-081-00	METAL CHIP	22K	5%	1/10W
R320	1-216-047-91	RES-CHIP	820	5%	1/10W
R321	1-216-047-91	RES-CHIP	820	5%	1/10W
R322	1-216-047-91	RES-CHIP	820	5%	1/10W
R323	1-216-041-00	METAL CHIP	470	5%	1/10W
R324	1-216-041-00	METAL CHIP	470	5%	1/10W
R325	1-216-041-00	METAL CHIP	470	5%	1/10W
R327	1-216-033-00	METAL CHIP	220	5%	1/10W
⚠R350	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R351	1-216-105-91	RES-CHIP	220K	5%	1/10W
R352	1-216-081-00	METAL CHIP	22K	5%	1/10W
R353	1-216-049-11	RES-CHIP	1K	5%	1/10W
R354	1-216-097-11	RES-CHIP	100K	5%	1/10W
R360	1-216-093-91	RES-CHIP	68K	5%	1/10W
R361	1-216-085-00	METAL CHIP	33K	5%	1/10W
R362	1-216-085-00	METAL CHIP	33K	5%	1/10W
R363	1-216-093-91	RES-CHIP	68K	5%	1/10W
R364	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R365	1-216-019-00	METAL CHIP	56	5%	1/10W
R370	1-216-093-91	RES-CHIP	68K	5%	1/10W
R371	1-216-085-00	METAL CHIP	33K	5%	1/10W
R372	1-216-085-00	METAL CHIP	33K	5%	1/10W
R373	1-216-093-91	RES-CHIP	68K	5%	1/10W
R374	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R375	1-216-019-00	METAL CHIP	56	5%	1/10W
R381	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R382	1-216-073-00	METAL CHIP	10K	5%	1/10W
R383	1-216-001-00	METAL CHIP	10	5%	1/10W
R386	1-216-009-91	RES-CHIP	22	5%	1/10W
R387	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R388	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R389	1-216-033-00	METAL CHIP	220	5%	1/10W
R390	1-216-021-00	METAL CHIP	68	5%	1/10W
R391	1-216-097-11	RES-CHIP	100K	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
R400	1-216-089-11	RES-CHIP	47K	5%	1/10W
R401	1-216-025-11	RES-CHIP	100	5%	1/10W
R402	1-216-025-11	RES-CHIP	100	5%	1/10W
R403	1-216-089-11	RES-CHIP	47K	5%	1/10W
R404	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
⚠R405	1-212-877-11	FUSIBLE	68	5%	1/4W
R406	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R408	1-216-013-00	METAL CHIP	33	5%	1/10W
R413	1-216-073-00	METAL CHIP	10K	5%	1/10W
R414	1-216-073-00	METAL CHIP	10K	5%	1/10W
R415	1-216-073-00	METAL CHIP	10K	5%	1/10W
R416	1-216-049-11	RES-CHIP	1K	5%	1/10W
R417	1-216-049-11	RES-CHIP	1K	5%	1/10W
		< RELAY >			
RY350	1-755-295-11	RELAY			
		< VIBRATOR >			
X321	1-781-998-11	VIBRATOR, CRYSTAL 45MHz			

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DISPLAY BOARD
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Ref. No.	Part No.	Description			Remarks
*	1-535-303-00	WIRE,JUMPER			
*	4-996-686-01	HOLDER (FL)			
		< CAPACITOR >			
C1001	1-126-785-11	ELECT	47uF	20.00%	10V
C1002	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1003	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C1004	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1005	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1006	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1007	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1008	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1009	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C1010	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1011	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1012	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1013	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1014	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1018	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1019	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1020	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1021	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1022	1-126-785-11	ELECT	47uF	20.00%	10V
C1023	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C1024	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C1025	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1026	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1028	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1037	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1038	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
* CN1001	1-568-934-11	PIN, CONNECTOR 7P			
* CN1002	1-568-954-11	PIN, CONNECTOR 5P			
CN1006	1-506-468-11	PIN, CONNECTOR 3P			
		< DIODE >			
D1000	8-719-046-40	DIODE SEL5521C-TH8F			
D1001	8-719-046-35	DIODE SEL5921A-TH8F			
D1002	8-719-016-74	DIODE 1SS352-TPH3			
D1003	8-719-210-39	DIODE EC10QS04-TE12L5			
		< GROUND >			
ET1001	1-537-770-21	TERMINAL BOARD, GROUND			
		< FILTER >			
FL1000	1-518-715-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC1001	8-759-337-52	IC LC75721E			
IC1002	8-752-921-04	IC XP84120-089Q			
		< TRANSISTOR >			
Q1000	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q1001	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q1002	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q1004	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q1005	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q1006	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
		< RESISTOR >			
R1000	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1001	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1003	1-216-027-00	METAL CHIP	120	5%	1/10W
R1006	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1008	1-216-121-11	RES-CHIP	1M	5%	1/10W
R1009	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1011	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1012	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1013	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1014	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1015	1-216-025-11	RES-CHIP	100	5%	1/10W
R1016	1-216-025-11	RES-CHIP	100	5%	1/10W
R1017	1-216-025-11	RES-CHIP	100	5%	1/10W
R1018	1-216-025-11	RES-CHIP	100	5%	1/10W
R1019	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1020	1-216-025-11	RES-CHIP	100	5%	1/10W
R1021	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1022	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1023	1-216-025-11	RES-CHIP	100	5%	1/10W
R1024	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1025	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1026	1-216-025-11	RES-CHIP	100	5%	1/10W
R1027	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1029	1-216-025-11	RES-CHIP	100	5%	1/10W
R1030	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1031	1-216-295-11	SHORT	0		
R1032	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1033	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1034	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1035	1-216-073-00	METAL CHIP	10K	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
R1038	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R1039	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1040	1-216-097-11	RES-CHIP	100K	5%	1/10W
R1041	1-216-097-11	RES-CHIP	100K	5%	1/10W
R1042	1-216-097-11	RES-CHIP	100K	5%	1/10W
R1044	1-216-027-00	METAL CHIP	120	5%	1/10W
R1045	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1046	1-216-027-00	METAL CHIP	120	5%	1/10W
R1047	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1048	1-216-033-00	METAL CHIP	220	5%	1/10W
R1049	1-216-033-00	METAL CHIP	220	5%	1/10W
R1050	1-216-037-00	METAL CHIP	330	5%	1/10W
R1051	1-216-037-00	METAL CHIP	330	5%	1/10W
R1052	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1053	1-216-041-00	METAL CHIP	470	5%	1/10W
R1054	1-216-041-00	METAL CHIP	470	5%	1/10W
R1055	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1056	1-216-045-00	METAL CHIP	680	5%	1/10W
		< COMPOSITION CIRCUIT BLOCK >			
RB1000	1-234-521-11	CIRCUIT BLOCK, COMPOSITION			
RB1001	1-234-521-11	CIRCUIT BLOCK, COMPOSITION			
RB1002	1-234-520-11	CIRCUIT BLOCK, COMPOSITION			
		< SWITCH >			
S1000	1-570-101-51	SWITCH, KEY BOARD (SACD/CD)			
S1003	1-771-349-21	SWITCH, KEYBOARD (PLAY)			
S1004	1-570-101-41	SWITCH, KEY BOARD (DISC SKIP)			
S1005	1-771-349-21	SWITCH, KEYBOARD (PAUSE)			
S1006	1-771-349-21	SWITCH, KEYBOARD (EX-CHANGE)			
S1007	1-771-349-21	SWITCH, KEYBOARD (STOP)			
S1008	1-771-349-21	SWITCH, KEYBOARD (EJECT)			
S1009	1-476-100-11	ENCODER, ROTARY (AMS)			
S1010	1-786-082-21	SWITCH, KEYBOARD (CHECK)			
S1011	1-786-082-21	SWITCH, KEYBOARD (CLEAR)			
		< VIBRATOR >			
X1000	1-781-472-21	VIBRATOR, CERAMIC			

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Ref. No.	Part No.	Description			Remarks
		DOOR MOTOR BOARD			
		******************			
		< CAPACITOR >			
C1027	1-165-319-11	CERAMIC CHIP	0.1uF		50V
		< CONNECTOR >			
* CN1005	1-568-942-11	PIN, CONNECTOR 4P			
CN1008	1-506-481-11	PIN, CONNECTOR 2P			

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Ref. No.	Part No.	Description			Remarks
		DOOR SW BOARD			
		***************			
* CN1016	1-568-941-11	PIN, CONNECTOR 3P			
		< SWITCH >			
S1022	1-771-339-41	SWITCH, PUSH (IN SW)			
S1023	1-771-339-41	SWITCH, PUSH (OUT SW)			

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Ref. No.	Part No.	Description			Remarks
		HP BOARD			
		*********			
*	4-962-201-01	PLATE(HP), GROUND			
		< CAPACITOR >			
C1101	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C1102	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C1103	1-165-319-11	CERAMIC CHIP	0.1uF		50V
		< CONNECTOR >			
* CN1101	1-568-952-91	PIN, CONNECTOR (STRAIGHT) 3P			
		< JACK >			
J1101	1-750-162-61	JACK (LARGE TYPE) (PHONES)			
		< COIL >			
L1101	1-424-090-11	COIL, LINE FILTER			
L1102	1-424-090-11	COIL, LINE FILTER			
L1103	1-424-090-11	COIL, LINE FILTER			
L1104	1-412-004-31	INDUCTOR	6.8uH		
L1105	1-412-004-31	INDUCTOR	6.8uH		
L1106	1-412-004-31	INDUCTOR	6.8uH		
		< VARIABLE RESISTOR >			
RV1101	1-223-935-11	RES, VAR, CARBON 1K/1K (PHONE LEVEL)			

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Ref. No.	Part No.	Description			Remarks
	1-676-246-11	JUNCTION BOARD			
		***************			
		< CAPACITOR >			
C10	1-124-589-11	ELECT	47uF	20%	16V
C11	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
CN11	1-573-911-11	PIN, CONNECTOR 13P			
CN13	1-506-481-11	PIN, CONNECTOR 2P			
* CN14	1-568-941-11	PIN, CONNECTOR 3P			
* CN15	1-568-825-11	SOCKET, CONNECTOR 6P			
CN15	1-568-825-11	CONNECTOR, FFC/FPC 6P			
CN15	1-784-767-11	CONNECTOR, FFC 6P			
		< IC >			
IC11	8-759-356-03	IC BA6780			
		< RESISTOR >			
R21	1-249-429-11	CARBON	10K	5%	1/4W
R22	1-249-426-11	CARBON	5.6K	5%	1/4W
R23	1-249-425-11	CARBON	4.7K	5%	1/4W F
R24	1-249-430-11	CARBON	12K	5%	1/4W
R25	1-249-382-11	CARBON	1.2	5%	1/6W F
R26	1-249-382-11	CARBON	1.2	5%	1/6W F
		< SWITCH >			
S11	1-771-836-11	SWITCH, LEVER(SLIDE)(OPEN/CLOSE DETECT)			

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Ref. No.	Part No.	Description			Remarks
		KEY BOARD			
		**********			
		< CONNECTOR >			
CN1004	1-506-468-11	PIN, CONNECTOR 3P			
		< RESISTOR >			
R1059	1-216-033-00	METAL CHIP	220	5%	1/10W
R1060	1-216-033-00	METAL CHIP	220	5%	1/10W
R1061	1-216-037-00	METAL CHIP	330	5%	1/10W
R1062	1-216-037-00	METAL CHIP	330	5%	1/10W
R1063	1-216-041-00	METAL CHIP	470	5%	1/10W
R1064	1-216-041-00	METAL CHIP	470	5%	1/10W
R1065	1-216-045-00	METAL CHIP	680	5%	1/10W
R1066	1-216-045-00	METAL CHIP	680	5%	1/10W
R1067	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R1068	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
		< SWITCH >			
S1012	1-771-349-21	SWITCH, KEYBOARD (DISC1)			
S1013	1-771-349-21	SWITCH, KEYBOARD (CONTINUE)			
S1014	1-771-349-21	SWITCH, KEYBOARD (DISC2)			
S1015	1-771-349-21	SWITCH, KEYBOARD (SHUFFLE)			
S1016	1-771-349-21	SWITCH, KEYBOARD (DISC3)			
S1017	1-771-349-21	SWITCH, KEYBOARD (PROGRAM)			
S1018	1-771-349-21	SWITCH, KEYBOARD (DISC4)			
S1019	1-771-349-21	SWITCH, KEYBOARD (MENU)			
S1020	1-771-349-21	SWITCH, KEYBOARD (DISC5)			
S1021	1-771-349-21	SWITCH, KEYBOARD (TIME/TEXT)			
**					
	1-676-244-11	LOADING MOTOR BOARD			
		*********************			
**					
	A-4725-364-A	MAIN BOARD, COMPLETE			
		********************			
		< CAPACITOR >			
C506	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C509	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C510	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C511	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C516	1-164-676-11	CERAMIC CHIP	2200PF	5.00%	16V
C517	1-125-822-11	TANTALUM	10uF	20.00%	10V
C518	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C519	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C520	1-126-395-11	ELECT	22uF	20%	16V
C521	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C523	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C525	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C526	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C528	1-125-822-11	TANTALUM	10uF	20.00%	10V
C530	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C531	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C532	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C533	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C534	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remarks
C535	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C536	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C537	1-216-864-11	METAL CHIP	0	5%	1/16W
C539	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C541	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C542	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C543	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C544	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C545	1-125-822-11	TANTALUM	10uF	20.00%	10V
C547	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C548	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C549	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C550	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C551	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C553	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C554	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C555	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C556	1-125-822-11	TANTALUM	10uF	20.00%	10V
C558	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C559	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C560	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C561	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C562	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C563	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C565	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C567	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C568	1-125-822-11	TANTALUM	10uF	20.00%	10V
C569	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C570	1-125-822-11	TANTALUM	10uF	20.00%	10V
C572	1-115-156-11	CERAMIC CHIP	1uF		10V
C573	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C577	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C579	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C582	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C583	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C584	1-126-395-11	ELECT	22uF	20%	16V
C587	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C588	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C589	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C590	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C591	1-125-822-11	TANTALUM	10uF	20.00%	10V
C592	1-125-822-11	TANTALUM	10uF	20.00%	10V
C701	1-125-822-11	TANTALUM	10uF	20.00%	10V
C702	1-125-822-11	TANTALUM	10uF	20.00%	10V
C703	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C704	1-115-156-11	CERAMIC CHIP	1uF		10V
C705	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C706	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C707	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C708	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C709	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C711	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C712	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C713	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C714	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C715	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C716	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C717	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C718	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C720	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V

Ref. No.	Part No.	Description			Remarks
C721	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C722	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C723	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C724	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C725	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C726	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C727	1-125-822-11	TANTALUM	10uF	20.00%	10V
C728	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C729	1-125-822-11	TANTALUM	10uF	20.00%	10V
C730	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C731	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C732	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C740	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C741	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C742	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C743	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C744	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C745	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C746	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C747	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C752	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C760	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C761	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C762	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C763	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C764	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C765	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C766	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C767	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C768	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C769	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C770	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C771	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C772	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C773	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C774	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C775	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C776	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C777	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C778	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C779	1-125-822-11	TANTALUM	10uF	20.00%	10V
C780	1-125-822-11	TANTALUM	10uF	20.00%	10V
C781	1-125-822-11	TANTALUM	10uF	20.00%	10V
C790	1-126-204-11	ELECT CHIP	47uF	20%	16V
C791	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C792	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C793	1-126-246-11	ELECT CHIP	220uF	20%	4V
C794	1-126-246-11	ELECT CHIP	220uF	20%	4V
C801	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C802	1-125-822-11	TANTALUM	10uF	20.00%	10V
C803	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C804	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C805	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C806	1-125-822-11	TANTALUM	10uF	20.00%	10V
C807	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C808	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C809	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C810	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C811	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C812	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remarks
C813	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C814	1-125-822-11	TANTALUM	10uF	20.00%	10V
C815	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C823	1-125-822-11	TANTALUM	10uF	20.00%	10V
C824	1-164-677-11	CERAMIC CHIP	0.033uF	10.00%	16V
C825	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C826	1-125-822-11	TANTALUM	10uF	20.00%	10V
C827	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C828	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C829	1-125-822-11	TANTALUM	10uF	20.00%	10V
C830	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C831	1-125-822-11	TANTALUM	10uF	20.00%	10V
C832	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C833	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C834	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C835	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C840	1-125-822-11	TANTALUM	10uF	20.00%	10V
C842	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C843	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C844	1-115-156-11	CERAMIC CHIP	1uF		10V
C845	1-125-822-11	TANTALUM	10uF	20.00%	10V
C846	1-128-994-21	ELECT CHIP	47uF	20%	10V
C847	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C850	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C851	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C852	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C901	1-125-822-11	TANTALUM	10uF	20.00%	10V
C902	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C903	1-125-822-11	TANTALUM	10uF	20.00%	10V
C904	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C905	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C906	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C907	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C908	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C909	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C910	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C911	1-125-822-11	TANTALUM	10uF	20.00%	10V
C913	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C914	1-125-822-11	TANTALUM	10uF	20.00%	10V
C915	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C916	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C917	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C918	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C920	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C921	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C923	1-115-156-11	CERAMIC CHIP	1uF		10V
C924	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C925	1-125-822-11	TANTALUM	10uF	20.00%	10V
C926	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C927	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C928	1-125-822-11	TANTALUM	10uF	20.00%	10V
C940	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C941	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C942	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C943	1-107-818-11	CAPACITOR	1F		5.5V
C950	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C951	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C960	1-128-994-21	ELECT CHIP	47uF	20%	10V
C962	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V

Ver. 1.1

MAIN

Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >	
CN503	1-784-883-21	CONNECTOR,FFC(LIF(NON-ZIF))35P	
CN701	1-794-606-41	PIN, CONNECTOR (PC BPARD 9P	
* CN801	1-750-005-11	PIN, CONNECTOR (PC BOARD) 4P	
CN901	1-784-868-21	CONNECTOR,FFC(LIF(NON-ZIF))16P	
CN902	1-784-861-21	CONNECTOR, FFC(LIF(NON-ZIF))9P	
CN904	1-774-653-41	PIN, CONNECTOR (PC BOARD) 3P	
CN905	1-794-804-11	PIN, CONNECTOR 13P	
CN906	1-794-805-11	PIN, CONNECTOR 11P	
		< DIODE >	
D901	8-719-016-74	DIODE 1SS352-TPH3	
D902	8-719-016-74	DIODE 1SS352-TPH3	
D903	8-719-049-09	DIODE 1SS367-T3SONY	
D904	8-719-049-09	DIODE 1SS367-T3SONY	
		< FERRITE BEAD >	
FB701	1-469-835-21	FERRITE 0UH	
FB702	1-469-835-21	FERRITE 0UH	
FB703	1-500-283-11	INDUCTOR 0UH	
FB704	1-500-283-11	INDUCTOR 0UH	
FB705	1-469-835-21	FERRITE 0UH	
FB706	1-469-835-21	FERRITE 0UH	
FB707	1-500-283-11	INDUCTOR 0UH	
FB708	1-500-283-11	INDUCTOR 0UH	
FB709	1-500-283-11	INDUCTOR 0UH	
FB710	1-500-283-11	INDUCTOR 0UH	
FB751	1-500-283-11	INDUCTOR 0UH	
FB752	1-500-283-11	INDUCTOR 0UH	
FB753	1-500-283-11	INDUCTOR 0UH	
FB754	1-500-283-11	INDUCTOR 0UH	
FB755	1-500-283-11	INDUCTOR 0UH	
FB756	1-500-283-11	INDUCTOR 0UH	
FB757	1-500-283-11	INDUCTOR 0UH	
FB801	1-500-283-11	INDUCTOR 0UH	
FB802	1-500-283-11	INDUCTOR 0UH	
FB803	1-500-283-11	INDUCTOR 0UH	
FB804	1-500-283-11	INDUCTOR 0UH	
		< FILTER >	
FL501	1-234-177-21	FILTER, CHIP EMI	
FL502	1-234-177-21	FILTER, CHIP EMI	
FL701	1-234-177-21	FILTER, CHIP EMI	
FL702	1-234-177-21	FILTER, CHIP EMI	
FL703	1-234-177-21	FILTER, CHIP EMI	
FL704	1-234-177-21	FILTER, CHIP EMI	
FL705	1-234-177-21	FILTER, CHIP EMI	
FL706	1-234-177-21	FILTER, CHIP EMI	
FL750	1-233-893-21	FILTER, CHIP EMI	
FL751	1-234-177-21	FILTER, CHIP EMI	
FL752	1-234-177-21	FILTER, CHIP EMI	
FL753	1-234-177-21	FILTER, CHIP EMI	
FL754	1-234-177-21	FILTER, CHIP EMI	
FL804	1-234-177-21	FILTER, CHIP EMI	
FL805	1-234-177-21	FILTER, CHIP EMI	
FL806	1-234-177-21	FILTER, CHIP EMI	
FL807	1-234-177-21	FILTER, CHIP EMI	
FL808	1-234-177-21	FILTER, CHIP EMI	
FL809	1-234-177-21	FILTER, CHIP EMI	
FL814	1-234-177-21	FILTER, CHIP EMI	

Ref. No.	Part No.	Description	Remarks
FL901	1-234-177-21	FILTER, CHIP EMI	
FL902	1-234-177-21	FILTER, CHIP EMI	
FL903	1-234-177-21	FILTER, CHIP EMI	
FL904	1-234-177-21	FILTER, CHIP EMI	
FL905	1-234-177-21	FILTER, CHIP EMI	
FL906	1-234-177-21	FILTER, CHIP EMI	
FL907	1-234-177-21	FILTER, CHIP EMI	
FL908	1-234-177-21	FILTER, CHIP EMI	
		< IC >	
IC502	8-759-567-26	IC BA5983FP-E2	
IC503	8-759-701-40	IC NJM3404AM-TE2	
IC504	8-759-473-95	IC uPC2905T-E1	
IC509	8-752-397-42	IC CXD3008Q	
IC512	8-759-490-71	IC BA5912AFP-YE2	
IC701	8-752-409-10	IC CXD1882R	
IC703	8-759-701-40	IC NJM3404AM-TE2	
IC704	8-759-082-60	IC TC7S66FU(TE85R)	
IC706	8-759-543-83	IC GM71VS18163CLT-6TR	
IC708	8-759-701-40	IC NJM3404AM-TE2	
IC801	8-752-400-60	IC CXD2751Q	
IC803	8-759-449-58	IC LM7131BCM5X	
IC804	8-752-356-45	IC CXD2301Q	
IC805	8-759-585-52	IC SN74AHC1GU04DBVR	
IC806	8-759-585-51	IC SN74AHC1G32DBVR	
IC807	8-759-585-52	IC SN74AHC1GU04DBVR	
IC808	8-759-676-10	IC MSM51V17805B-60TS-K	
IC809	8-759-549-23	IC SN74LV74APWR	
IC810	8-759-585-52	IC SN74AHC1GU04DBVR	
IC811	8-759-549-25	IC SN74LVU04APWR	
IC812	8-759-549-15	IC SN74LV245APWR	
IC813	8-759-549-15	IC SN74LV245APWR	
IC814	8-759-649-33	IC SN74AHCT1G08DCKR	
IC815	8-759-524-19	IC TC74VHC164FT(EL)	
IC901	8-752-921-20	IC CXP973064-204R	
IC902	8-752-392-03	IC CXD1095BR	
IC903	8-759-487-04	IC BR24C02F-E2	
IC904	8-759-685-33	IC BU2500FV-E2	
IC905	8-759-636-64	IC M51957BFP-600C	
IC906	8-759-645-76	IC TC74VHCT32AFT	
IC907	8-759-050-39	IC SN74HC574APWR	
IC908	8-759-641-01	IC LC35256DM-70	
IC909	8-759-660-04	IC SN74HC139APWR	
IC910	8-759-082-60	IC TC7S66FU(TE85R)	
IC920	8-759-460-76	IC BA07FP-E2	
		< COIL >	
L801	1-410-369-11	INDUCTOR CHIP 1uH	
L802	1-410-369-11	INDUCTOR CHIP 1uH	
L803	1-410-369-11	INDUCTOR CHIP 1uH	
		< TRANSISTOR >	
Q901	8-729-402-42	TRANSISTOR UN5213-TX	
Q902	8-729-017-30	TRANSISTOR RN1703-TE85R	
Q903	8-729-017-30	TRANSISTOR RN1703-TE85R	
Q904	8-729-017-30	TRANSISTOR RN1703-TE85R	
Q905	8-729-120-28	TRANSISTOR 2SC2412K-T-147-R	

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R501	1-216-833-11	METAL CHIP	10K	5%	1/16W
R502	1-216-833-11	METAL CHIP	10K	5%	1/16W
R513	1-216-797-11	METAL CHIP	10	5%	1/16W
R515	1-216-864-11	METAL CHIP	0	5%	1/16W
R516	1-216-797-11	METAL CHIP	10	5%	1/16W
R518	1-216-797-11	METAL CHIP	10	5%	1/16W
R519	1-216-864-11	METAL CHIP	0	5%	1/16W
R520	1-216-864-11	METAL CHIP	0	5%	1/16W
R522	1-216-864-11	METAL CHIP	0	5%	1/16W
R523	1-216-797-11	METAL CHIP	10	5%	1/16W
R529	1-218-748-11	METAL CHIP	220K	0.5%	1/16W
R530	1-218-748-11	METAL CHIP	220K	0.5%	1/16W
R533	1-216-864-11	METAL CHIP	0	5%	1/16W
R534	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W
R538	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R540	1-216-833-11	METAL CHIP	10K	5%	1/16W
R541	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R544	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R545	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R549	1-216-864-11	METAL CHIP	0	5%	1/16W
R554	1-216-837-11	METAL CHIP	22K	5%	1/16W
R555	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W
R556	1-216-839-11	METAL CHIP	33K	5%	1/16W
R557	1-216-841-11	METAL CHIP	47K	5%	1/16W
R558	1-216-841-11	METAL CHIP	47K	5%	1/16W
R559	1-216-797-11	METAL CHIP	10	5%	1/16W
R560	1-216-821-11	METAL CHIP	1K	5%	1/16W
R561	1-216-821-11	METAL CHIP	1K	5%	1/16W
R562	1-216-821-11	METAL CHIP	1K	5%	1/16W
R563	1-216-797-11	METAL CHIP	10	5%	1/16W
R569	1-216-864-11	METAL CHIP	0	5%	1/16W
R572	1-216-797-11	METAL CHIP	10	5%	1/16W
R573	1-216-797-11	METAL CHIP	10	5%	1/16W
R576	1-216-864-11	METAL CHIP	0	5%	1/16W
R577	1-216-864-11	METAL CHIP	0	5%	1/16W
R578	1-216-864-11	METAL CHIP	0	5%	1/16W
R583	1-216-864-11	METAL CHIP	0	5%	1/16W
R584	1-218-728-11	METAL CHIP	33K	0.5%	1/16W
R585	1-216-864-11	METAL CHIP	0	5%	1/16W
R586	1-216-864-11	METAL CHIP	0	5%	1/16W
R587	1-216-864-11	METAL CHIP	0	5%	1/16W
R588	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R589	1-218-728-11	METAL CHIP	33K	0.5%	1/16W
R590	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R591	1-218-702-11	METAL CHIP	2.7K	0.5%	1/16W
R592	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
R593	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R594	1-218-728-11	METAL CHIP	33K	0.5%	1/16W
R595	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
R596	1-216-864-11	METAL CHIP	0	5%	1/16W
R597	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R599	1-218-702-11	METAL CHIP	2.7K	0.5%	1/16W
R600	1-216-864-11	METAL CHIP	0	5%	1/16W
R601	1-218-724-11	METAL CHIP	22K	0.5%	1/16W
R602	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
R603	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W
R604	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
R605	1-216-864-11	METAL CHIP	0	5%	1/16W
R606	1-216-841-11	METAL CHIP	47K	5%	1/16W
R607	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
R608	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R609	1-216-864-11	METAL CHIP	0	5%	1/16W
R610	1-216-864-11	METAL CHIP	0	5%	1/16W
R611	1-218-724-11	METAL CHIP	22K	0.5%	1/16W
R612	1-216-864-11	METAL CHIP	0	5%	1/16W
R613	1-216-857-11	METAL CHIP	1M	5%	1/16W
R614	1-216-864-11	METAL CHIP	0	5%	1/16W
R615	1-216-864-11	METAL CHIP	0	5%	1/16W
R617	1-216-857-11	METAL CHIP	1M	5%	1/16W
R618	1-218-911-11	METAL CHIP	470K	0.5%	1/16W
R619	1-216-864-11	METAL CHIP	0	5%	1/16W
R622	1-216-864-11	METAL CHIP	0	5%	1/16W
R623	1-216-864-11	METAL CHIP	0	5%	1/16W
R625	1-216-815-11	METAL CHIP	330	5%	1/16W
R626	1-216-864-11	METAL CHIP	0	5%	1/16W
R627	1-216-864-11	METAL CHIP	0	5%	1/16W
R628	1-216-864-11	METAL CHIP	0	5%	1/16W
R629	1-216-864-11	METAL CHIP	0	5%	1/16W
R632	1-216-833-11	METAL CHIP	10K	5%	1/16W
R634	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R642	1-216-839-11	METAL CHIP	33K	5%	1/16W
R644	1-216-797-11	METAL CHIP	10	5%	1/16W
R645	1-216-797-11	METAL CHIP	10	5%	1/16W
R654	1-216-833-11	METAL CHIP	10K	5%	1/16W
R655	1-216-821-11	METAL CHIP	1K	5%	1/16W
R656	1-216-821-11	METAL CHIP	1K	5%	1/16W
R657	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R658	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R659	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R660	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R661	1-220-920-11	RES-CHIP	0.47	5%	1/2W
R662	1-216-833-11	METAL CHIP	10K	5%	1/16W
R663	1-216-833-11	METAL CHIP	10K	5%	1/16W
R670	1-216-833-11	METAL CHIP	10K	5%	1/16W
R671	1-216-833-11	METAL CHIP	10K	5%	1/16W
R672	1-216-833-11	METAL CHIP	10K	5%	1/16W
R701	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R702	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R703	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R704	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R705	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R706	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R707	1-218-668-11	METAL CHIP	100	0.5%	1/16W
R708	1-216-857-11	METAL CHIP	1M	5%	1/16W
R709	1-218-736-11	METAL CHIP	68K	0.5%	1/16W
R710	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R711	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R712	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R713	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R714	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R716	1-218-668-11	METAL CHIP	100	0.5%	1/16W
R717	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R718	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R719	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
R720	1-216-821-11	METAL CHIP	1K	5%	1/16W
R721	1-218-728-11	METAL CHIP	33K	0.5%	1/16W
R724	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
R725	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R726	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R727	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W

MAIN

Ref. No.	Part No.	Description			Remarks
R728	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R729	1-216-864-11	METAL CHIP	0	5%	1/16W
R730	1-216-801-11	METAL CHIP	22	5%	1/16W
R731	1-216-801-11	METAL CHIP	22	5%	1/16W
R732	1-216-833-11	METAL CHIP	10K	5%	1/16W
R733	1-216-833-11	METAL CHIP	10K	5%	1/16W
R734	1-216-833-11	METAL CHIP	10K	5%	1/16W
R735	1-216-833-11	METAL CHIP	10K	5%	1/16W
R736	1-216-833-11	METAL CHIP	10K	5%	1/16W
R737	1-216-833-11	METAL CHIP	10K	5%	1/16W
R738	1-216-833-11	METAL CHIP	10K	5%	1/16W
R739	1-216-864-11	METAL CHIP	0	5%	1/16W
R740	1-216-833-11	METAL CHIP	10K	5%	1/16W
R741	1-216-801-11	METAL CHIP	22	5%	1/16W
R742	1-216-801-11	METAL CHIP	22	5%	1/16W
R743	1-216-801-11	METAL CHIP	22	5%	1/16W
R744	1-216-801-11	METAL CHIP	22	5%	1/16W
R745	1-216-841-11	METAL CHIP	47K	5%	1/16W
R746	1-216-841-11	METAL CHIP	47K	5%	1/16W
R750	1-216-833-11	METAL CHIP	10K	5%	1/16W
R752	1-216-864-11	METAL CHIP	0	5%	1/16W
R753	1-216-864-11	METAL CHIP	0	5%	1/16W
R754	1-216-864-11	METAL CHIP	0	5%	1/16W
R755	1-216-864-11	METAL CHIP	0	5%	1/16W
R756	1-216-864-11	METAL CHIP	0	5%	1/16W
R757	1-216-864-11	METAL CHIP	0	5%	1/16W
R758	1-216-864-11	METAL CHIP	0	5%	1/16W
R759	1-216-864-11	METAL CHIP	0	5%	1/16W
R761	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R762	1-218-724-11	METAL CHIP	22K	0.5%	1/16W
R763	1-218-714-11	METAL CHIP	8.2K	0.5%	1/16W
R764	1-216-857-11	METAL CHIP	1M	5%	1/16W
R765	1-218-728-11	METAL CHIP	33K	0.5%	1/16W
R766	1-216-864-11	METAL CHIP	0	5%	1/16W
R767	1-218-728-11	METAL CHIP	33K	0.5%	1/16W
R768	1-216-809-11	METAL CHIP	100	5%	1/16W
R769	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R770	1-216-864-11	METAL CHIP	0	5%	1/16W
R771	1-216-801-11	METAL CHIP	22	5%	1/16W
R772	1-216-801-11	METAL CHIP	22	5%	1/16W
R773	1-216-833-11	METAL CHIP	10K	5%	1/16W
R776	1-216-864-11	METAL CHIP	0	5%	1/16W
R777	1-216-864-11	METAL CHIP	0	5%	1/16W
R778	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R780	1-216-864-11	METAL CHIP	0	5%	1/16W
R781	1-216-864-11	METAL CHIP	0	5%	1/16W
R786	1-216-864-11	METAL CHIP	0	5%	1/16W
R790	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R791	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R792	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R793	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R803	1-216-803-11	METAL CHIP	33	5%	1/16W
R804	1-218-724-11	METAL CHIP	22K	0.5%	1/16W
R805	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R806	1-216-864-11	METAL CHIP	0	5%	1/16W
R808	1-216-801-11	METAL CHIP	22	5%	1/16W
R809	1-216-801-11	METAL CHIP	22	5%	1/16W
R810	1-216-801-11	METAL CHIP	22	5%	1/16W
R811	1-216-801-11	METAL CHIP	22	5%	1/16W
R812	1-216-801-11	METAL CHIP	22	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R813	1-216-801-11	METAL CHIP	22	5%	1/16W
R814	1-216-801-11	METAL CHIP	22	5%	1/16W
R815	1-216-801-11	METAL CHIP	22	5%	1/16W
R816	1-216-809-11	METAL CHIP	100	5%	1/16W
R817	1-216-809-11	METAL CHIP	100	5%	1/16W
R819	1-216-809-11	METAL CHIP	100	5%	1/16W
R820	1-218-713-11	METAL CHIP	7.5K	0.5%	1/16W
R821	1-216-801-11	METAL CHIP	22	5%	1/16W
R822	1-216-801-11	METAL CHIP	22	5%	1/16W
R823	1-216-801-11	METAL CHIP	22	5%	1/16W
R824	1-216-864-11	METAL CHIP	0	5%	1/16W
R825	1-216-805-11	METAL CHIP	47	5%	1/16W
R826	1-216-805-11	METAL CHIP	47	5%	1/16W
R827	1-216-809-11	METAL CHIP	100	5%	1/16W
R828	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R829	1-216-809-11	METAL CHIP	100	5%	1/16W
R830	1-216-801-11	METAL CHIP	22	5%	1/16W
R831	1-216-845-11	METAL CHIP	100K	5%	1/16W
R832	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R833	1-216-809-11	METAL CHIP	100	5%	1/16W
R834	1-216-809-11	METAL CHIP	100	5%	1/16W
R847	1-216-801-11	METAL CHIP	22	5%	1/16W
R853	1-216-813-11	METAL CHIP	220	5%	1/16W
R854	1-216-813-11	METAL CHIP	220	5%	1/16W
R855	1-216-813-11	METAL CHIP	220	5%	1/16W
R858	1-216-819-11	METAL CHIP	680	5%	1/16W
R859	1-216-819-11	METAL CHIP	680	5%	1/16W
R860	1-216-819-11	METAL CHIP	680	5%	1/16W
R875	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R876	1-216-864-11	METAL CHIP	0	5%	1/16W
R877	1-216-833-11	METAL CHIP	10K	5%	1/16W
R878	1-216-833-11	METAL CHIP	10K	5%	1/16W
R879	1-216-833-11	METAL CHIP	10K	5%	1/16W
R880	1-216-833-11	METAL CHIP	10K	5%	1/16W
R881	1-216-833-11	METAL CHIP	10K	5%	1/16W
R891	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R892	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R893	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R894	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R901	1-216-801-11	METAL CHIP	22	5%	1/16W
R902	1-216-801-11	METAL CHIP	22	5%	1/16W
R903	1-216-801-11	METAL CHIP	22	5%	1/16W
R904	1-216-801-11	METAL CHIP	22	5%	1/16W
R905	1-216-801-11	METAL CHIP	22	5%	1/16W
R906	1-216-801-11	METAL CHIP	22	5%	1/16W
R907	1-216-801-11	METAL CHIP	22	5%	1/16W
R908	1-216-801-11	METAL CHIP	22	5%	1/16W
R909	1-216-801-11	METAL CHIP	22	5%	1/16W
R910	1-216-864-11	METAL CHIP	0	5%	1/16W
R911	1-216-864-11	METAL CHIP	0	5%	1/16W
R912	1-216-833-11	METAL CHIP	10K	5%	1/16W
R913	1-216-833-11	METAL CHIP	10K	5%	1/16W
R914	1-216-174-00	RES-CHIP	100	5%	1/8W
R915	1-216-809-11	METAL CHIP	100	5%	1/16W
R916	1-216-821-11	METAL CHIP	1K	5%	1/16W
R917	1-216-821-11	METAL CHIP	1K	5%	1/16W
R918	1-216-174-00	RES-CHIP	100	5%	1/8W
R919	1-216-801-11	METAL CHIP	22	5%	1/16W
R920	1-216-809-11	METAL CHIP	100	5%	1/16W
R921	1-216-809-11	METAL CHIP	100	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R922	1-216-801-11	METAL CHIP	22	5%	1/16W
R923	1-216-833-11	METAL CHIP	10K	5%	1/16W
R924	1-216-833-11	METAL CHIP	10K	5%	1/16W
R925	1-216-809-11	METAL CHIP	100	5%	1/16W
R926	1-216-809-11	METAL CHIP	100	5%	1/16W
R927	1-216-809-11	METAL CHIP	100	5%	1/16W
R928	1-216-809-11	METAL CHIP	100	5%	1/16W
R929	1-216-809-11	METAL CHIP	100	5%	1/16W
R930	1-216-809-11	METAL CHIP	100	5%	1/16W
R931	1-216-809-11	METAL CHIP	100	5%	1/16W
R932	1-216-809-11	METAL CHIP	100	5%	1/16W
R934	1-216-833-11	METAL CHIP	10K	5%	1/16W
R935	1-216-833-11	METAL CHIP	10K	5%	1/16W
R936	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R937	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R938	1-216-833-11	METAL CHIP	10K	5%	1/16W
R939	1-216-809-11	METAL CHIP	100	5%	1/16W
R940	1-216-809-11	METAL CHIP	100	5%	1/16W
R941	1-216-809-11	METAL CHIP	100	5%	1/16W
R942	1-216-809-11	METAL CHIP	100	5%	1/16W
R943	1-216-809-11	METAL CHIP	100	5%	1/16W
R944	1-216-833-11	METAL CHIP	10K	5%	1/16W
R945	1-216-833-11	METAL CHIP	10K	5%	1/16W
R946	1-216-833-11	METAL CHIP	10K	5%	1/16W
R947	1-216-864-11	METAL CHIP	0	5%	1/16W
R948	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R949	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R950	1-216-833-11	METAL CHIP	10K	5%	1/16W
R951	1-216-821-11	METAL CHIP	1K	5%	1/16W
R952	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R953	1-216-833-11	METAL CHIP	10K	5%	1/16W
R954	1-216-833-11	METAL CHIP	10K	5%	1/16W
R955	1-216-801-11	METAL CHIP	22	5%	1/16W
R956	1-216-801-11	METAL CHIP	22	5%	1/16W
R957	1-216-801-11	METAL CHIP	22	5%	1/16W
R958	1-216-864-11	METAL CHIP	0	5%	1/16W
R959	1-216-833-11	METAL CHIP	10K	5%	1/16W
R960	1-216-833-11	METAL CHIP	10K	5%	1/16W
R961	1-216-821-11	METAL CHIP	1K	5%	1/16W
R962	1-216-833-11	METAL CHIP	10K	5%	1/16W
R964	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W
R965	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
R969	1-216-833-11	METAL CHIP	10K	5%	1/16W
R970	1-216-833-11	METAL CHIP	10K	5%	1/16W
R971	1-216-809-11	METAL CHIP	100	5%	1/16W
R973	1-216-864-11	METAL CHIP	0	5%	1/16W
R974	1-216-833-11	METAL CHIP	10K	5%	1/16W
R975	1-216-833-11	METAL CHIP	10K	5%	1/16W
R976	1-216-833-11	METAL CHIP	10K	5%	1/16W
R977	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R978	1-216-833-11	METAL CHIP	10K	5%	1/16W
R979	1-216-833-11	METAL CHIP	10K	5%	1/16W
R980	1-216-833-11	METAL CHIP	10K	5%	1/16W
R981	1-216-833-11	METAL CHIP	10K	5%	1/16W
R982	1-216-864-11	METAL CHIP	0	5%	1/16W
R983	1-216-864-11	METAL CHIP	0	5%	1/16W
R985	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W
R988	1-216-864-11	METAL CHIP	0	5%	1/16W
R991	1-216-864-11	METAL CHIP	0	5%	1/16W
R992	1-216-864-11	METAL CHIP	0	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R994	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R995	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W
R998	1-216-864-11	METAL CHIP	0	5%	1/16W

< VIBRATOR >

X901	1-781-945-21	VIBRATOR, CERAMIC 20MHz			

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REMOTE SENSOR BOARD
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< CAPACITOR >

C1000	1-164-505-11	CERAMIC CHIP	2.2uF		16V

< IC >

IC1000	8-749-923-80	IC GP1U90XB			

< RESISTOR >

R1002	1-216-025-11	RES-CHIP	100	5%	1/10W

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A-4725-382-A RF BOARD, COMPLETE
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< CAPACITOR >

C001	1-164-676-11	CERAMIC CHIP	2200PF	5.00%	16V
C002	1-164-676-11	CERAMIC CHIP	2200PF	5.00%	16V
C003	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C004	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C005	1-128-993-21	ELECT CHIP	22uF	20%	10V
C006	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C007	1-124-779-00	ELECT CHIP	10uF	20%	16V
C008	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C009	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C010	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C011	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C012	1-164-172-11	CERAMIC CHIP	0.0056uF	10.00%	25V
C013	1-164-172-11	CERAMIC CHIP	0.0056uF	10.00%	25V
C014	1-124-779-00	ELECT CHIP	10uF	20%	16V
C015	1-124-779-00	ELECT CHIP	10uF	20%	16V
C016	1-164-218-11	CERAMIC CHIP	180PF	0.25PF	50V
C017	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C018	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C019	1-124-779-00	ELECT CHIP	10uF	20%	16V
C020	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C021	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C022	1-115-416-11	CERAMIC CHIP	0.001uF	5.00%	25V
C023	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C024	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C025	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C026	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C027	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C028	1-128-993-21	ELECT CHIP	22uF	20%	10V
C029	1-124-779-00	ELECT CHIP	10uF	20%	16V
C030	1-128-993-21	ELECT CHIP	22uF	20%	10V
C031	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C032	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C033	1-128-993-21	ELECT CHIP	22uF	20%	10V
C034	1-124-779-00	ELECT CHIP	10uF	20%	16V
C036	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V

RF SENSOR

Ref. No.	Part No.	Description			Remarks
C037	1-115-416-11	CERAMIC CHIP	0.001uF	5.00%	25V
C038	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C039	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C040	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C041	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C042	1-164-677-11	CERAMIC CHIP	0.033uF	10.00%	16V
C043	1-164-677-11	CERAMIC CHIP	0.033uF	10.00%	16V
C044	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C045	1-115-416-11	CERAMIC CHIP	0.001uF	5.00%	25V
C046	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C047	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C048	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C049	1-128-993-21	ELECT CHIP	22uF	20%	10V
C050	1-128-993-21	ELECT CHIP	22uF	20%	10V
C051	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C052	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C055	1-128-993-21	ELECT CHIP	22uF	20%	10V
C060	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C064	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C068	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C069	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C070	1-128-993-21	ELECT CHIP	22uF	20%	10V
C071	1-128-993-21	ELECT CHIP	22uF	20%	10V
C081	1-164-357-11	CERAMIC CHIP	0.001uF	5.00%	50V
C082	1-164-357-11	CERAMIC CHIP	0.001uF	5.00%	50V
C084	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C094	1-128-993-21	ELECT CHIP	22uF	20%	10V
C095	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
		< CONNECTOR >			
CN001	1-774-731-21	PIN, CONNECTOR (PC BOARD) 5P			
CN002	1-770-161-21	PIN, CONNECTOR (PC BOARD) 6P			
CN003	1-794-707-11	CONNECTOR, FFC/FPC 25P			
CN005	1-784-883-21	CONNECTOR,FFC(LIF(NON-ZIF))35P			
		< DIODE >			
D001	8-719-016-74	DIODE 1SS352-TPH3			
D002	8-719-016-74	DIODE 1SS352-TPH3			
		< IC >			
IC001	8-752-403-50	IC CXD1881R			
IC004	8-759-058-45	IC NJM3403AV(TE2)			
IC081	8-759-701-40	IC NJM3404AM-TE2			
		< COIL >			
L001	1-412-031-11	INDUCTOR CHIP	47uH		
L002	1-412-031-11	INDUCTOR CHIP	47uH		
L003	1-412-031-11	INDUCTOR CHIP	47uH		
		< TRANSISTOR >			
Q001	8-729-805-25	TRANSISTOR	2SB1121-ST-TD		
Q002	8-729-805-25	TRANSISTOR	2SB1121-ST-TD		
Q003	8-729-805-25	TRANSISTOR	2SB1121-ST-TD		
Q005	8-729-820-90	TRANSISTOR	2SD1621-ST-TD		

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R001	1-216-864-11	METAL CHIP	0	5%	1/16W
R002	1-218-668-11	METAL CHIP	100	0.5%	1/16W
R003	1-216-839-11	METAL CHIP	33K	5%	1/16W
R005	1-216-864-11	METAL CHIP	0	5%	1/16W
R006	1-216-864-11	METAL CHIP	0	5%	1/16W
R007	1-216-864-11	METAL CHIP	0	5%	1/16W
R008	1-216-864-11	METAL CHIP	0	5%	1/16W
R011	1-216-864-11	METAL CHIP	0	5%	1/16W
R012	1-216-864-11	METAL CHIP	0	5%	1/16W
R013	1-216-864-11	METAL CHIP	0	5%	1/16W
R014	1-216-864-11	METAL CHIP	0	5%	1/16W
R015	1-216-803-11	METAL CHIP	33	5%	1/16W
R016	1-216-821-11	METAL CHIP	1K	5%	1/16W
R017	1-216-817-11	METAL CHIP	470	5%	1/16W
R018	1-216-821-11	METAL CHIP	1K	5%	1/16W
R019	1-216-803-11	METAL CHIP	33	5%	1/16W
R020	1-216-817-11	METAL CHIP	470	5%	1/16W
R021	1-219-570-11	RES-CHIP	10M	5%	1/16W
R022	1-218-718-11	METAL CHIP	12K	0.5%	1/16W
R023	1-216-864-11	METAL CHIP	0	5%	1/16W
R024	1-216-864-11	METAL CHIP	0	5%	1/16W
R025	1-216-864-11	METAL CHIP	0	5%	1/16W
R027	1-216-864-11	METAL CHIP	0	5%	1/16W
R029	1-216-841-11	METAL CHIP	47K	5%	1/16W
R030	1-216-821-11	METAL CHIP	1K	5%	1/16W
R031	1-216-864-11	METAL CHIP	0	5%	1/16W
R032	1-216-864-11	METAL CHIP	0	5%	1/16W
R033	1-216-864-11	METAL CHIP	0	5%	1/16W
R036	1-216-833-11	METAL CHIP	10K	5%	1/16W
R044	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R046	1-218-668-11	METAL CHIP	100	0.5%	1/16W
R053	1-216-864-11	METAL CHIP	0	5%	1/16W
R054	1-216-864-11	METAL CHIP	0	5%	1/16W
R060	1-216-864-11	METAL CHIP	0	5%	1/16W
R065	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R066	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R068	1-216-839-11	METAL CHIP	33K	5%	1/16W
R082	1-216-833-11	METAL CHIP	10K	5%	1/16W
R083	1-216-833-11	METAL CHIP	10K	5%	1/16W
R084	1-216-833-11	METAL CHIP	10K	5%	1/16W
R085	1-216-833-11	METAL CHIP	10K	5%	1/16W
R086	1-216-833-11	METAL CHIP	10K	5%	1/16W
R087	1-216-833-11	METAL CHIP	10K	5%	1/16W
R088	1-216-864-11	METAL CHIP	0	5%	1/16W
R089	1-216-864-11	METAL CHIP	0	5%	1/16W
R093	1-216-803-11	METAL CHIP	33	5%	1/16W
R094	1-216-803-11	METAL CHIP	33	5%	1/16W
R097	1-216-839-11	METAL CHIP	33K	5%	1/16W
R098	1-216-839-11	METAL CHIP	33K	5%	1/16W

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	1-676-245-11	SENSOR BOARD *************			
		< CONNECTOR >			
CN10	1-750-243-11	SOCKET, CONNECTOR 6P			

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D10	8-749-924-18	PHOTO INTERRUPTER RPI-1391 (TABLE SENSOR)	
D11	8-749-017-45	SENSOR, PHONT RPR-220C1N (DISC SENSOR)	
		< RESISTOR >	
R10	1-249-416-11	CARBON 820 5% 1/4W	F
R11	1-249-407-11	CARBON 150 5% 1/4W	F
R12	1-249-429-11	CARBON 10K 5% 1/4W	

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MISCELLANEOUS
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Ref. No.	Part No.	Description	Remarks
82	1-541-632-11	MOTOR, DC (DOOR)	
102	1-757-135-11	WIRE (FLAT TYPE) (35 CORE)	
103	1-757-136-11	WIRE (FLAT TYPE) (16 CORE)	
104	1-757-137-11	WIRE (FLAT TYPE) (9 CORE)	
⚠106	1-783-531-31	CORD, POWER	
271	1-791-930-11	WIRE (FLAT TYPE) (6 CORE)	
273	1-757-097-11	WIRE (FLAT TYPE) (25 CORE)	
⚠275	8-820-132-02	OPTICAL PICK-UP KHM-230AAA/J1NP	
S200	1-418-746-11	ENCODER, ROTARY	
⚠T101	1-435-732-11	TRANSFORMER, POWER	
⚠T102	1-435-733-11	TRANSFORMER, POWER	

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ACCESSORIES & PACKING MATERIALS
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Ref. No.	Part No.	Description	Remarks
	1-476-263-11	REMOTECOMMANDER (RM-SC300)	
	1-558-271-11	CORD,CONNECTION	
	4-230-687-01	MANUAL, INSTRUCTION (ENGLISH)	
	4-228-696-01	COVER, BATTERY (for RM-SC300)	

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HARDWARE LIST
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Ref. No.	Part No.	Description	Remarks
#1	7-685-646-79	SCREW +BVTP3X8 TYPE2 N-S	
#2	7-685-871-01	SCREW +BVTT3X6 (S)	
#4	7-685-885-09	SCREW +BVTT4X16 (S)	
#5	7-621-775-00	SCREW +B 2.6X3	
#6	7-624-106-04	STOPRING 3.0, TYPE -E	
#7	7-685-646-11	SCREW +BVTP3X8 CZN	
#8	7-685-646-19	SCREW +BVTP3X8 BZN	
#9	7-685-647-11	SCREW +BVTP3X10	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2000.10	New
1.1	2005.06	Correction of Part No. for IC901. (SPM-05043)